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A Comparative Study of Trends in Globalization Using Different Synthetic Indicators

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Abstract

Using the KOF data at the annual level, we construct ten different composite indices for comparing the extent of globalization of 131 countries for eleven years, 1999-2009. We compare the different indices of globalization among themselves and also with the Dreher-KOF index of globalization and find that among the different indices the Dreher-Chebyshev index is the most representative one. Among the countries, we concentrate on the trends in globalization of India and her neighboring countries, Bangladesh, China, and Pakistan.

Keywords: Synthetic, Composite indices, Pena indicators, Particle Swarm, Combinatorial optimization, Globalization, Tsallis entropy, Sharma-Mittal entropy, Maximin problem.

JEL Codes: C18, C43, C44, C61, F01, F15, F43

I. Introduction: Globalization (of a country or an economy, in particular) means increasing cross-border (international) relationships among the peoples encompassing their economic activities, socio-political systems and cultures. It is the “process of creating networks of connections among actors at multi-continental distances, mediated through a variety of flows including people, information and ideas, capital and goods. Globalization is conceptualized as a process that erodes national boundaries, integrates national economies, cultures, technologies and governance and produces complex relations of mutual interdependence” (Dreher, 2006). The protagonists of globalization hold that globalization may contribute to economic growth through spread effect, increased specialization and appropriation of comparative advantages (Bhagwati, 2004). However, the antagonists differ as they suspect the backwash effect and unwelcome human consequences to follow the process of globalization (Bauman, 1998). The empirical evidences are mixed (Mishra & Nayak, 2006).

The extent of globalization of all countries is gradually increasing over time, especially since 1980's, when after a persistent experience of economic slow-down in the 1970's, the (-then) USSR opted for a reform leading to opening of the economy and strengthening of the role of market forces. Later, soon after the disintegration of the (-then) USSR, most of its constituent economies opted for economic reforms leading to globalization. In 1991, India, that claimed to have a faith in the 'socialistic pattern of society' but hatched capitalism in disguise (Jha, 1963), hurriedly opted for economic reforms leading to liberalization and globalization. China has been taking progressively active steps in this direction to become a highly attractive destination to large foreign direct investment (Chen 2011). Some of the

reasons that make China favored for FDI are the considerably good governance and inclination of the Chinese institutions to protect the foreign firms better than the domestic ones (Fan et al., 2007).

II. Quantification of the Extent and Different Composite Indices of Globalization: The extent of globalization (of a country) can, in principle, be numerically measured and an index can be constructed (by synthesizing many indicators or constituent variables of globalization) so as to compare different countries as to the extent of globalization attained by them. The KOF Index of Globalization is one of such indices, but alternative methodologies, based on different formulas of synthesis, may be used to construct such indices. In what follows, we describe the various (among many other possible) indices of globalization. These indices may broadly be classified into two categories: (i) norm-maximizing indices and (ii) entropy maximizing indices. On a different consideration, though, they may be classified into (i) order-independent, and (ii) order dependent indices. Order-independent indices are immune to permutations or the order in which the constituent variables enter into the formula of synthesis. However, order-dependent indices do not have this attribute or property. As we will see later, all composite indices that use Pena's method of weight assignment are order-dependent and need a criterion to arrive at an optimal composite index.

1. Dreher-KOF Index of Globalization: Since 2002, Axel Dreher of the Business Cycle Research Institute (KOF or Konjunkturforschungsstelle) in the Swiss Federal Institute of Technology (ETH or Eidgenössische Technische Hochschule), Zurich has been compiling a vast information on different aspects of globalization and constructing the KOF Index of Globalization, year-wise, for a very large number of countries (see KOF, 2012). The Dreher-KOF Index of Globalization synthesizes three aspects of globalization, viz. economic, social and political. Under economic globalization, actual economic flows (such as trans-border trade, direct investment and portfolio investment, call it ECO-1) and restrictions on trans-border trade as well as capital movement by means of taxation, tariff, etc (call it ECO-2) are included. In social globalization, trans-border personal contacts (degree of tourism, telecom traffic, postal interactions, etc, SOC-1), flow of information (SOC-2) and cultural proximity (SOC-3) are included. The political globalization (POL-1) includes the number of embassies and high commissions in a country, membership of international organizations, participation in UN peace missions, and the treaties signed between two or more states (Dreher, 2006; Dreher et al., 2008). The three sub-indices (economic, social and political) are constructed by the method of the Principal Component Analysis (PCA) so that the sub-indices explain the maximum possible variation in the data. At the subsequent level, the three sub-indices are synthesized into the overall index of globalization using the PCA. Thus, the Dreher-KOF Index of Globalization is an application of the PCA at two stages.

At this juncture, two points may be noted. First, that the PCA obtains weights (w) such that the sum of the squared Karl Pearson's coefficients of correlation between the composite index ($Z = Xw$) and the constituent variables ($x_j \in X; j = 1, 2, \dots, m$) is maximized, or $\sum_{j=1}^m |r(Z, x_j)|^2$ is maximized. Viewed differently, the PCA maximizes the Euclidean norm of $r(Z, x_j); j = 1, 2, \dots, m$. This maximization is traditionally carried out as suggested by Hotelling (1933), although it is possible to carry it out by direct numerical optimization. The second point pertains to the loss of information due to obtaining the overall index at two stages (Mishra, 1984). Schematically, it can be shown as follows. Let there be a matrix, $X = [X_1 | X_2]$. The variance-covariance matrix will be $\frac{1}{n} \begin{bmatrix} X_1'X_1 & X_1'X_2 \\ X_2'X_1 & X_2'X_2 \end{bmatrix}$. Now, working on

$\frac{1}{n} \begin{bmatrix} X_1'X_1 & 0 \\ 0 & X_2'X_2 \end{bmatrix}$ is tantamount to working on $(1/n)X_1'X_1$ and $(1/n)X_2'X_2$ separately and vice versa.

Thus, in the process of two-stage PCA, the information contained in $(1/n)X_1'X_2$ is lost. This also amounts to (forcibly and incorrectly) assuming that X_1 and X_2 are not correlated. Later, when two sub-indices are used to construct the overall composite index, the assumption committed earlier is violated. It would be appropriate, therefore, to construct the overall composite index using full X rather than at two stages.

2. Dreher-Manhattan Index of Globalization: It has been noted that PCA maximizes $\sum_{j=1}^m |r(Z, x_j)|^2$ and, by implication, the Euclidean (or Mikowski's $L_{p=2}$) norm, $[\sum_{j=1}^m |r(Z, x_j)|^2]^{1/2}$. Instead, if we maximize the $L_{p=1}$ norm, $\sum_{j=1}^m |r(Z, x_j)|$, over X and obtain the overall composite index at one go (rather than at two stages), we obtain a new index (Mishra, 2010, 2011).

3. Dreher-Hotelling Index of Globalization: This is the usual PCA index constructed from X at one go. It maximizes $\sum_{j=1}^m |r(Z, x_j)|^2$. Quite frequently, the index obtained by this method faces two criticisms; the first that it gives only an ordinal index (Somarriba & Pena, 2009) and the second that the index is elitist due to having a preference for the highly correlated subset of X over the poorly correlated ones (Mishra, 2010, 2011). It can be shown that direct optimization yields cardinal scores and, therefore, the first criticism is not of the PCA per se, but of the mathematical method by which it is traditionally worked out. The second criticism is fundamentally rooted in the choice of the Euclidean (or Mikowski's $L_{p=2}$) norm on which the PCA rests.

4. Dreher-Chebyshev Index of Globalization: If we maximize the $L_{p \rightarrow (-\infty)}$ norm over X and obtain the overall composite index at one go (rather than at two stages), we obtain a new index (Mishra, 2010, 2011) that maximizes the minimal absolute correlation, $\max(\min_j |r(Z, x_j)|; j = 1, 2, \dots, m)$. This is the maximin approach suggested by Wald (1950) to robust decision-making that maximizes the minimum gain over the alternatives. The approach to maximization of $\min_j |r(Z, x_j)|; j = 1, 2, \dots, m$ also pertains to the Chebyshev norm.

5. Dreher-Shannon Index of Globalization: The four composite indices described above rely on the principle of maximization of some type of norm or distance (Manhattan, Euclidean or Chebyshev). However, a composite index may be obtained by entropy maximization (over the correlation coefficients). Among the various measures of entropy (Esteban & Morales, 1995), the usual Shannon's entropy measure is used (e.g. in Paris, 2001; Mishra, 2004; Mishra, 2011). The index is often very close to the one that maximizes the $L_{p=1}$ norm over the correlation coefficients.

6. Pena-Manhattan Index of Globalization: Away from the methods that use correlation between the composite index and the constituent variables ($r(Z, x_j); j = 1, 2, \dots, m$) as the decision variables for optimization and accordingly compute weights assigned to different constituent variable to make

$Z = Xw$, Pena (1977) suggested that the weight, w_j , should be $1 - R_{j,j-t,\dots,1}^2; 1 \leq t < j$ where $R_{j,j-t,\dots,1}^2; 1 \leq t < j$ is the coefficient of determination of the regression of x_j on $x_{j-1}, x_{j-2}, \dots, x_1$. Further, $R_1^2 = 0$ (Somarriba & Pena, 2009). Unfortunately, Pena's method of assignment of weights depends on the order in which the constituent variables enter into the analysis (Montero, 2010; Mishra, 2012a) and the iterative scheme suggested by Montero (2010) may not converge. As a result, Pena's method yields as many composite indices as the number of m-factorial, where m is the number of constituent variables in X . This number (m-factorial) is very large even for a moderate value of m. To overcome this problem, Mishra (2012b) suggested that Pena's method may be constrained to optimize the representation of X (constituent variables) by $Z = Xw$ (the composite index) so that $\min_j |r(Z, x_j)|; j = 1, 2, \dots, m$ is maximized (that is, Wald's maximin principle is observed). Since Pena's method obtains $w_j = 1 - R_{j,j-t,\dots,1}^2; 1 \leq t < j$, the choice of optimum order of constituent variables gives rise to formulation of combinatorial (discrete) optimization problem, which may be solved by a suitable method (such as the Combinatorial Particle Swarm method of global optimization). Now, instead of maximizing $\min_j |r(Z, x_j)|; j = 1, 2, \dots, m$, if one chooses to maximize $\sum_{j=1}^m |r(Z, x_j)|$, while $Z = Xw$ and $w_j = 1 - R_{j,j-t,\dots,1}^2; 1 \leq t < j$, one obtains Pena-Manhattan Index. The solution may be obtained by a suitable method of optimization such as the Combinatorial Particle Swarm Optimization method.

7. Pena-Euclid Index of Globalization: If one chooses to maximize $\sum_{j=1}^m |r(Z, x_j)|^2$, while $Z = Xw$ and the weights, $w_j = 1 - R_{j,j-t,\dots,1}^2; 1 \leq t < j$, are obtained by Pena's method, one obtains Pena-Euclid Index, since it maximizes the Euclidean norm (Minkowski's $L_{p=2}$). The solution may be obtained by a suitable method of optimization such as the Combinatorial Particle Swarm Optimization method.

8. Pena-Wald Index of Globalization: If one chooses to maximize $\min_j |r(Z, x_j)|; j = 1, 2, \dots, m$, while $Z = Xw$ and the weights, $w_j = 1 - R_{j,j-t,\dots,1}^2; 1 \leq t < j$, are obtained by Pena's method, one obtains Pena-Wald Index, since it maximizes the floor (minimal) correlation. The solution may be obtained by a suitable method of optimization such as the Combinatorial Particle Swarm Optimization method.

9. Pena-Shannon Index of Globalization: The composite index, $Z = Xw$, obtained by Pena's method (in which the weight are $w_j = 1 - R_{j,j-t,\dots,1}^2; 1 \leq t < j$) has a relative frequency distribution away from the uniform distribution. The divergence between the observed (the empirically obtained) and the uniform probability distributions can be used to obtain a (relative) measure of Shannon's entropy (Mishra, 2012c). If Z is chosen such that it has the maximum Shannon's entropy, we obtain the Pena-Shannon index. The Shannon's measure of entropy presumes independence and additivity and, therefore, by implication, precludes the possibility of diffusion (of the forces that cause or are caused by globalization).

10. Pena-Tsallis Index of Globalization: Instead of using the Shannon measure of entropy (as in the Pena-Shannon Index), the Tsallis measure of entropy (with a single parameter, q_1) can be used (Mishra, 2012c). This measure of entropy does not presume independence, has pseudo-additivity (composability) and, therefore, by implication, allows for the possibility of diffusion (of the forces that cause or are caused by globalization). The Shannon's measure of entropy is a special (limiting) case of Tsallis measure of entropy. It may be noted that departure from additivity is measured by $|1 - q_1|$ which is zero for the Shannon's entropy and positive for the Tsallis entropy except in the limiting case when $q_1 \rightarrow 1$.

11. Pena-Mittal Index of Globalization: Pena-Mittal (or Pena-Sharma-Mittal, with two parameters q_1 and q_2) composite index is based on a further generalization of the entropy measure (Sharma-Mittal measure of entropy), of which Shannon's and Tsallis' measures of entropy are the special cases. This measure of entropy (and the composite index based on its maximization) does not presume independence, has pseudo-additivity (composability) and, therefore, by implication, allows for the possibility of diffusion (of the forces that cause or are caused by globalization). In case of this measure of entropy, the departure from additivity is measured by $|1 - q_1|$ and $|1 - q_2|$.

III. The Present Study, its Objectives and Methodology: The present study aims at computing the composite indices of overall globalization by the different methods outlined above and compare them with the KOF index of globalization. Methodologically, we do not make three sub-indices (relating to economic, social and political globalization) and then synthesize them to the overall composite index, but construct the overall index at one go. We permit, therefore, the variables under different categories - economic, social and political - to interact. Secondly, we include only 131 countries in our analysis, while the KOF study has 208 countries. Thirdly, we limit our study to 11 years beginning 1999 and ending 2009. Fourthly, in a section of this paper we concentrate on India and her neighbor countries. The data for this study is a subset of the vast data available at (and free downloadable from) the KOF website (KOF, 2012).

For computing the different indices of globalization we have used our own program (codes in FORTRAN - 77). As a technique, we use the Particle Swarm Optimization (PSO) method of global optimization, since the problems at hand could not have been solved by the traditional methods of optimization. The PSO is well recognized for solving very difficult non-convex and multi-modal problems of optimization and can easily be used for solving combinatorial (discrete) optimization problems. Even for the Principal Component score (Dreher-Hotelling Index of Globalization), for which there is no dearth of ready-to-use software, we have used the direct optimization method (PSO) giving exactly comparable results.

IV. The Findings: The Dreher-KOF and the other ten alternative composite indices of globalization have been appended in the Tables A-00 through A-10. The Dreher-KOF indices are available for 208 countries, but we have reported (rather reproduced) them for 131 countries only. The other ten indices also are for 131 countries (for 11 years, 1999-2009) only. In what follows, we describe the main features of the ten alternative indices, with a reference to the Dreher-KOF index of globalization. All indices are constructed by pooling the cross-section (countries) and time series (1999-2009) data with $131 \times 11 = 1441$ observations in all.

1. Correlation among the Constituent Variable (or Indicators) of Globalization: The Dreher-KOF index of globalization has two indicators of economic globalization (ECO-1 and ECO-2), three indicators of social globalization (SOC-1, SOC-2 and SOC-3) and a single indicator of political globalization (POL-1). It may be interesting, first of all, to look into the correlation among them. We use the pooled data set (1441 observations) for computation of correlation (Table-1).

Table-1. Correlation Among Constituent Variables of the Indices of Globalization						
	ECO-1	Eco-2	SOC-1	SOC-2	SOC-3	POL-1
ECO-1	1.0000	0.5290	0.6480	0.6148	0.4585	0.0745
ECO-2	0.5290	1.0000	0.6575	0.7381	0.7235	0.3870
SOC-1	0.6480	0.6575	1.0000	0.7936	0.6629	0.1679
SOC-2	0.6148	0.7381	0.7936	1.0000	0.7196	0.3013
SOC-3	0.4585	0.7235	0.6629	0.7196	1.0000	0.5213
POL-1	0.0745	0.3870	0.1679	0.3013	0.5213	1.0000

It is observed that the first four indicators (ECO-1, ECO-2, SOC-1 and SOC-2) have a minimum of $r = 0.529$ among them (Eco-1: flow; and Eco-2: restrictions). SOC-2 (flow of information) and SOC-3 (cultural proximity) are correlated with $r \approx 0.72$. In turn, SOC-3 is correlated with POL-1 with $r \approx 0.52$. Economic restriction (ECO-2) is highly correlated with SOC-2 and SOC-3. Overall, the indicators of social globalization are more closely knit with each other with a minimal correlation of $r = 0.6629$.

2. The Structural Properties of Different Indices of Globalization: The indices of globalization are the weighted (linear) aggregations of the constituent variables i.e. $Z = Xw$. The weights (w) for the different indices are based on different criteria (such as maximization of a particular norm, or entropy, etc). Thus the structural properties of different indices are different, which are presented in Table-2.1.

Table-2.1. Structural Properties of Different Indices of Globalization										
Index	Weights Obtained by Different Indicators (Constituent Variables)						Entropy and related Parameters			Order
	ECO-1	Eco-2	SOC-1	SOC-2	SOC-3	POL	S(Z)	q_1	q_2	
Dreher-KOF	0.181818	0.181818	0.127071	0.130808	0.115859	0.262626	<u>0.944425</u>	<u>0.749554</u>	NA	ANY
Dreher-Manhattan	0.708949	0.860383	0.837966	0.888586	0.871184	0.522806	<u>0.954294</u>	<u>0.786580</u>	NA	ANY
Dreher-Hotelling	0.719253	0.867097	0.862607	0.905952	0.866458	0.451337	<u>0.966814</u>	<u>0.807714</u>	NA	ANY
Dreher-Chebyshev	0.713222	0.713222	0.713222	0.725757	0.751370	0.713222	<u>0.912358</u>	<u>0.710628</u>	NA	ANY
Dreher-Shannon	0.709847	0.861221	0.840104	0.890196	0.871160	0.517235	<u>0.955577</u>	<u>0.787362</u>	NA	ANY
Pena-Manhattan	0.684804	0.609579	0.455237	1.000000	0.400520	0.297149	<u>0.945058</u>	<u>0.748694</u>	NA	4,3,2,5,1,6
Pena-Euclid	0.662328	0.580034	1.000000	0.352759	0.458436	0.364039	<u>0.956729</u>	<u>0.784901</u>	NA	3,2,4,5,1,6
Pena-Wald	0.374543	0.408081	0.585673	0.297149	0.850264	1.000000	<u>0.935897</u>	<u>0.709652</u>	NA	6,5,2,1,3,4
Pena-Shannon	1.000000	0.287362	0.394480	0.693965	0.364039	0.789756	0.941353	NA	<u>NA</u>	1,6,4,3,2,5
Pena-Tsallis	0.476585	0.382964	0.543998	0.349425	0.651902	1.000000	0.958468	0.765981	<u>NA</u>	6,1,2,4,3,5
Pena-Mittal	1.000000	0.661259	0.536300	0.494143	0.270807	0.476585	0.956658	0.000032	<u>0.842016</u>	1,6,4,5,2,3

In the Table-2.1, the first six columns report the non-standardized (raw) weights obtained by the different constituent variables for the various indices of globalization. Those raw weights are not comparable across the indices. However, the weights may be standardized so as to sum up to unity, yielding the relative weights. An application of relative weights preserves the order, sign and correlation of indices, but only alters the scale. Such relative weights (with the raw weights corresponding to them) are presented in Table-2.2.

Table-2.2. Raw and Relative Weights Obtained by the Constituent Variables of Globalization							
Index	Weights Obtained by Different Indicators (Constituent Variables)						Aggregate
	ECO-1	Eco-2	SOC-1	SOC-2	SOC-3	POL	
Dreher- KOF	NA	NA	NA	NA	NA	NA	NA
	0.181818	0.181818	0.127071	0.130808	0.115859	0.262626	1.000
Dreher- Manhattan	0.708949	0.860383	0.837966	0.888586	0.871184	0.522806	4.689874
	0.151166	0.183455	0.178676	0.189469	0.185759	0.111475	1.000
Dreher-Hotelling	0.719253	0.867097	0.862607	0.905952	0.866458	0.451337	4.672704
	0.153927	0.185566	0.184606	0.193882	0.185430	0.096590	1.000
Dreher-Chebyshev	0.713222	0.713222	0.713222	0.725757	0.751370	0.713222	4.330015
	0.164716	0.164716	0.164716	0.167611	0.173526	0.164716	1.000
Dreher-Shannon	0.709847	0.861221	0.840104	0.890196	0.871160	0.517235	4.689763
	0.151361	0.183638	0.179136	0.189817	0.185758	0.110290	1.000
Pena-Manhattan	0.684804	0.609579	0.455237	1.000000	0.400520	0.297149	3.447289
	0.198650	0.176829	0.132057	0.290083	0.116184	0.086198	1.000
Pena-Euclid	0.662328	0.580034	1.000000	0.352759	0.458436	0.364039	3.417596
	0.193799	0.169720	0.292603	0.103218	0.134140	0.106519	1.000
Pena-Wald	0.374543	0.408081	0.585673	0.297149	0.850264	1.000000	3.515710
	0.106534	0.116074	0.166587	0.084520	0.241847	0.284438	1.000
Pena-Shannon	1.000000	0.287362	0.394480	0.693965	0.364039	0.789756	3.529602
	0.283318	0.081415	0.111763	0.196613	0.103139	0.223752	1.000
Pena-Tsallis	0.476585	0.382964	0.543998	0.349425	0.651902	1.000000	3.404874
	0.139971	0.112475	0.159770	0.102625	0.191461	0.293697	1.000
Pena-Mittal	1.000000	0.661259	0.536300	0.494143	0.270807	0.476585	3.439094
	0.290774	0.192277	0.155942	0.143684	0.078744	0.138579	1.000
Note: The weights with aggregate = 1.000 are relative weights. NA means that the relative weights alone are available.							

It is observed that while the Dreher-KOF method assigns lowest weight to SOC-3 (vis-à-vis other constituent variables), Dreher-Chebyshev and Pena-Wald methods assign relatively much larger weights to it. On the other hand, POL-1 is assigned the largest weight by Dreher-KOF, but method such as Dreher-Hotelling, Pena-Manhattan and Pena-Euclid assign much smaller (relative) weights to it. In short, the different indices of globalization weigh the constituent variables strikingly differently.

Returning back to Table-2.1, we observe that in case of first six indices of globalization (from Dreher-KOF to Pena-Wald), the columns captioned '*entropy and related parameters*' report the values of $S(Z)$ and q_1 that are underlined. This is so because those indices do not structurally incorporate an entropy measure or the parameter associated with it. In case of all those six indices, only the Tsallis measure of (relative) entropy has been obtained, which has one parameter, q_1 . In case of the Pena-Shannon index, the

Shannon measure of entropy, which is a part of its structure, has been obtained. It has no q_1 . In the Pena-Tsallis index, entropy and its parameter are structurally incorporated. In the Pena-Mittal index, the Sharma-Mittal entropy (with two parameters, q_1 and q_2) is structural.

We observe that among the norm-based indices, the Dreher-Hotelling index has the largest and the Dreher-Wald index has the smallest value of the Tsallis entropy. Among the Pena indices that do not have entropy as their structural part, Pena-Euclid has the largest and the Pena-Wald has the smallest value of Tsallis entropy. Dreher-Chebyshev and Pena-Wald have larger departure from additivity than the other indices. The Dreher-KOF index occupies a middle position when judged on all these criteria.

Regarding the order in which the constituent variables enter into the Pena indices, no particular regularity is found, except that 2 (ECO-2) and 5 (SOC-3) never occupy the first position as well as 1 (ECO-1) and 2 (restrictions) never occupy the last position. Thus, the changes in the criteria of optimization affect the positions of 3 (SOC-1) and 6 (POL-1) most frequently.

3. Correlation among the Indices of Globalization: In Table-3 we present correlation among the alternative indices. We observe, first, that the Dreher-KOF index of globalization is highly correlated with all other (alternative) indices. In a relative sense, the Dreher-KOF index correlates increasingly with Dreher-Chebyshev, Dreher-Hotelling, Pena-Euclid, Pena-Shannon, Dreher-Shannon, Dreher-Manhattan, Pena-Wald, Pena-Manhattan, Pena-Mittal and Pena-Tsallis, in that order. It is having the smallest correlation ($r = 0.9424$) with the Dreher-Chebyshev index and the largest correlation ($r = 0.9961$) with the Pena-Tsallis index.

In particular, we note that the coefficient of correlation between the Pena-Tsallis and the Pena-Mittal indices of globalization is very large ($r = 0.9995$). We may conclude, therefore, that (in our data) the Pena-Mittal measure of entropy is (almost) degenerating to the Tsallis entropy.

Table-3. Correlation Among Different Indices of Globalization											
	Dreher-KOF	Dreher-Manhattan	Dreher-Hotelling	Dreher-Chebyshev	Dreher-Shannon	Pena-Manhattan	Pena-Euclid	Pena-Wald	Pena-Shannon	Pena-Tsallis	Pena-Mittal
Dreher KOF	1.0000	0.9946	0.9830	0.9424	0.9939	0.9950	0.9865	0.9946	0.9901	0.9961	0.9958
Dreher Manhattan	0.9946	1.0000	0.9963	0.9233	1.0000	0.9920	0.9946	0.9811	0.9901	0.9913	0.9917
Dreher Hotelling	0.9830	0.9963	1.0000	0.8914	0.9969	0.9835	0.9907	0.9631	0.9805	0.9811	0.9819
Dreher Chebyshev	0.9424	0.9233	0.8914	1.0000	0.9209	0.9272	0.9331	0.9513	0.9500	0.9277	0.9293
Dreher Shannon	0.9939	1.0000	0.9969	0.9209	1.0000	0.9916	0.9946	0.9799	0.9896	0.9908	0.9912
Pena-Manhattan	0.9950	0.9920	0.9835	0.9272	0.9916	1.0000	0.9788	0.9930	0.9834	0.9873	0.9861
Pena-Euclid	0.9865	0.9946	0.9907	0.9331	0.9946	0.9788	1.0000	0.9692	0.9865	0.9818	0.9850
Pena-Wald	0.9946	0.9811	0.9631	0.9513	0.9799	0.9930	0.9692	1.0000	0.9787	0.9869	0.9855
Pena-Shannon	0.9901	0.9901	0.9805	0.9500	0.9896	0.9834	0.9865	0.9787	1.0000	0.9896	0.9899
Pena-Tsallis	0.9961	0.9913	0.9811	0.9277	0.9908	0.9873	0.9818	0.9869	0.9896	1.0000	0.9995
Pena-Mittal	0.9958	0.9917	0.9819	0.9293	0.9912	0.9861	0.9850	0.9855	0.9899	0.9995	1.0000

4. Correlation among Different Indices of Globalization and their Constituent Variables: An overall composite index ($Z = Xw$) represents the constituent variables (X or the indicators). The coefficient of correlation between Z and $x_j \in X$ or $r(Z, x_j)$ is a measure of such representation. The overall representativeness of Z for X may be measured by $\sum |r|$ or $\sum |r|^2$.

We use the pooled data set (1441 observations) for computation of correlation (Table-4). It is observed that on the criteria of $\sum |r|$ and $\sum |r|^2$, the Dreher-KOF outperforms six alternative indices, but, in turn, is outperformed by four alternative indices (Pena-Euclid, Dreher-Hotelling, Dreher-Shannon and Dreher-Manhattan). It is natural that Dreher-Manhattan would outperform all others on the $\sum |r|$ criterion since it is obtained by maximization of $\sum |r|$. Similarly, Dreher-Hotelling would outperform all others on the $\sum |r|^2$ criterion since it maximizes $\sum |r|^2$. Also, the possible reason for a better performance of Dreher-Hotelling (over Dreher-KOF) may lie in the fact that while the former is synthesized at a single stage, the latter is synthesized at two stages, resulting in a loss of information.

On the criterion of minimal correlation (with the constituent variables), the Dreher-KOF index is outperformed by only two alternative indices (Dreher-Chebyshev and Pena-Wald). This is expected since those two alternative indices have been constructed on the maxi-min principle.

Table-4. Correlation Among Different Indices of Globalization and their Constituent Variables								
Indices/Indicators	ECO-1	ECO-2	SOC-1	SOC-2	SOC-3	POL-1	$\sum r $	$\sum r ^2$
Dreher-KOF	0.6751	0.8613	0.7923	0.8551	0.8804	<u>0.6002</u>	4.6644	3.6919
Dreher-Manhattan	0.7090	0.8604	0.8380	0.8886	0.8712	<u>0.5228</u>	4.6900	3.7671
Dreher-Hotelling	0.7193	0.8671	0.8626	0.9060	0.8665	<u>0.4513</u>	4.6728	3.7887
Dreher-Chebyshev	0.7132	0.7132	0.7132	0.7258	0.7514	<u>0.7132</u>	4.3300	3.1260
Dreher-Shannon	0.7098	0.8612	0.8401	0.8902	0.8712	<u>0.5172</u>	4.6897	3.7702
Pena-Manhattan	0.6901	0.9006	0.7820	0.8594	0.8544	<u>0.5657</u>	4.6522	3.6874
Pena-Euclid	0.7198	0.8259	0.8765	0.8731	0.8536	<u>0.5158</u>	4.6647	3.7255
Pena-Wald	<u>0.6472</u>	0.8709	0.7419	0.8253	0.8579	0.6579	4.6011	3.5777
Pena-Shannon	0.7592	0.8209	0.8006	0.8421	0.8720	<u>0.5488</u>	4.6436	3.6619
Pena-Tsallis	0.6626	0.8455	0.7851	0.8493	0.9163	<u>0.5901</u>	4.6489	3.6794
Pena-Mittal	0.6642	0.8437	0.7987	0.8432	0.9157	<u>0.5855</u>	4.6510	3.6832

Note: The minimal correlation for each index is underlined.

5. Centrality of the Alternative Indices of Globalization: It may be interesting to enquire as to which one of the indices of globalization is most central (in the sense of minimizing the absolute error) among themselves. To investigate into this centrality issue, we first standardize all the eleven indices (through changing their origin by subtracting their respective arithmetic mean from their individual values and then rescaling them by their respective standard deviation or $z_{ij}^* = (z_{ij} - \bar{z}_j) / \sigma_j$). Then we work out their centrality $C_j = \sum_{k=1}^{11} \sum_{i=1}^n |z_{ik}^* - z_{ij}^*|$; $j = 1, 2, \dots, 11$; $k \neq j$. This transformation is needed because the different indices are measured on difference scales. The centrality measures (C) are reported in Table-5.

Table-5. Centrality Measures of Indices of Globalization											
	Dreher-KOF	Dreher-Manhattan	Dreher-Hotelling	Dreher-Chebyshev	Dreher-Shannon	Pena-Manhattan	Pena-Euclid	Pena-Wald	Pena-Shannon	Pena-Tsallis	Pena-Mittal
C	1176.16	1181.13	1192.52	1157.41	1181.94	1175.98	1178.01	1173.51	1162.62	1179.29	1178.36
Rank	5	9	11	1	10	4	6	3	2	8	7

In Table-5 we observe that (among the different indices) the Dreher-Chebyshev minimizes the sum of absolute deviation and, thus, it is most central (in the median sense). The Pena-Shannon index occupies the second rank followed by the Pena-Wald and the Pena-Manhattan indices. The Dreher-KOF occupies the fifth rank. At the other end, the Dreher-Hotelling obtains the 11th rank, superseded by the Dreher-Shannon (10th), Dreher-Manhattan (9th), Pena-Tsallis (8th), Pena-Mittal (7th) and Pena-Euclid (6th).

V. A Closer Look at the Globalization Trends of India and its Major Neighboring Countries: From the viewpoint of contiguity, population size, area, political importance, competition, cooperation, etc. India has three major neighboring countries: China, Pakistan and Bangladesh. Interestingly, these four countries almost fully represent the possible variations in economic, social and political aspects of globalization. Also, these four are developing countries for which globalization has numerous implications. In 1999 (the base year for our study) the Dreher-KOF indices of their globalization is presented in Table-6.

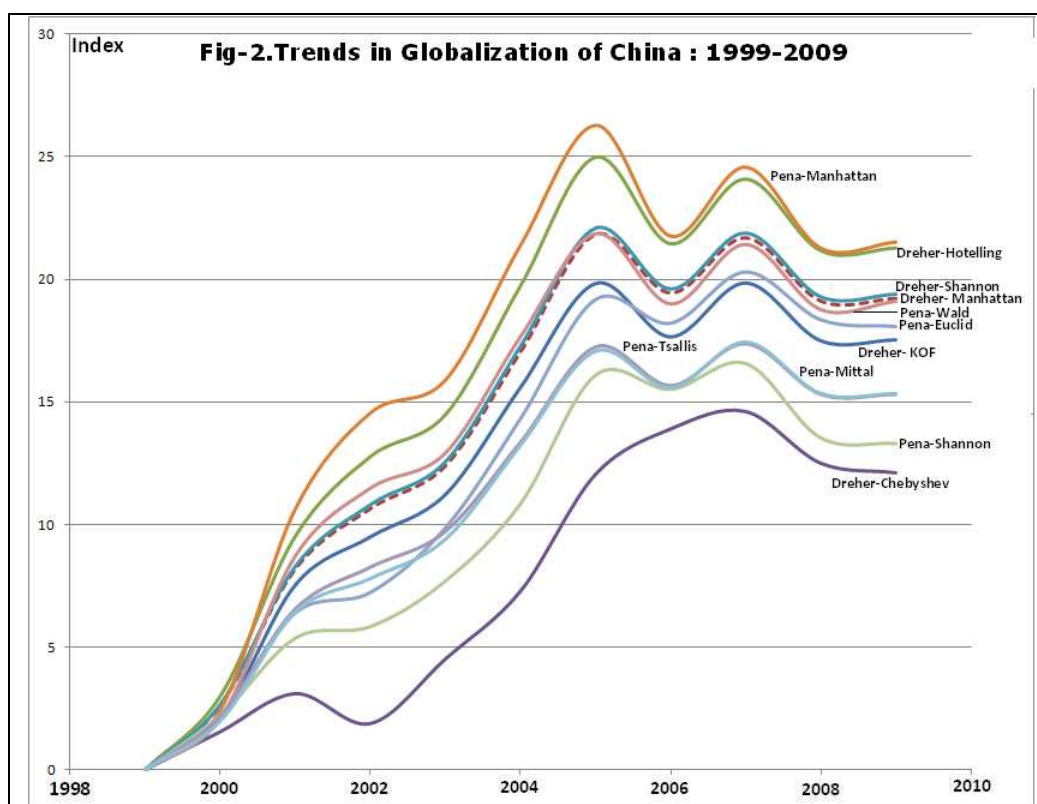
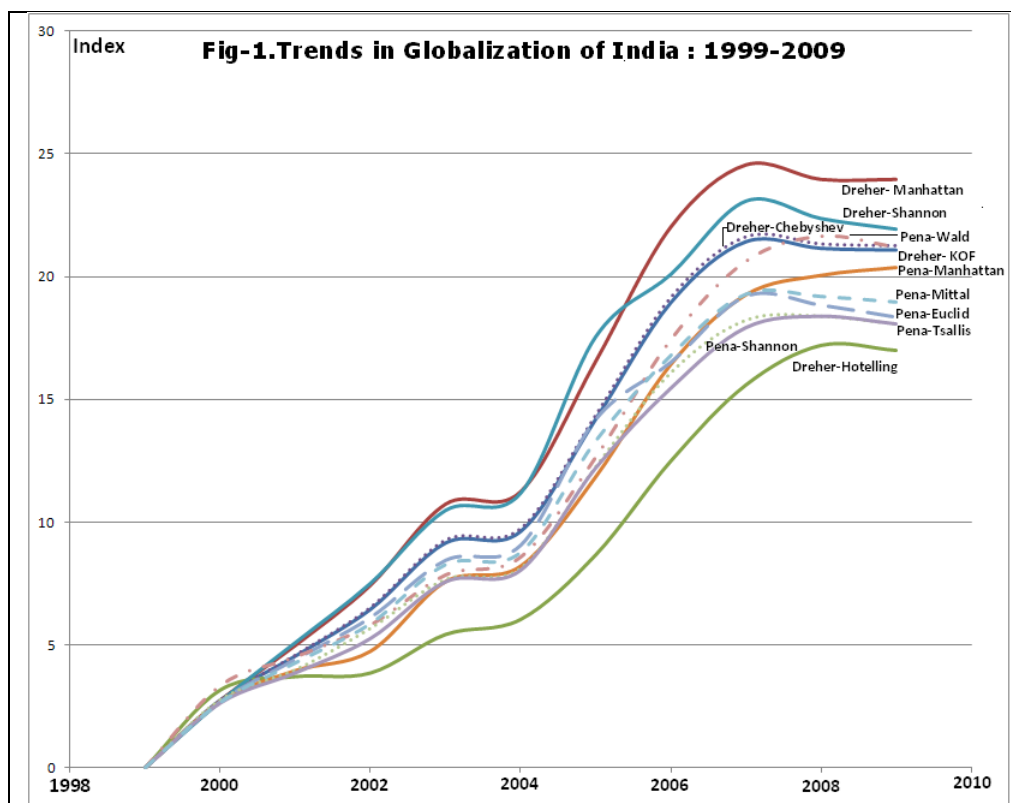
In Table-6 we observe that China was at a considerably high level of globalization in 2009, followed by Pakistan, India and Bangladesh. In particular, SOC-1 of Pakistan was much higher than that of India, China and Bangladesh. Of course, India had POL-1 higher than all of its neighbors considered here. ECO (especially ECO-1) of India was less than China as well as Pakistan. SOC-3 of China was very high.

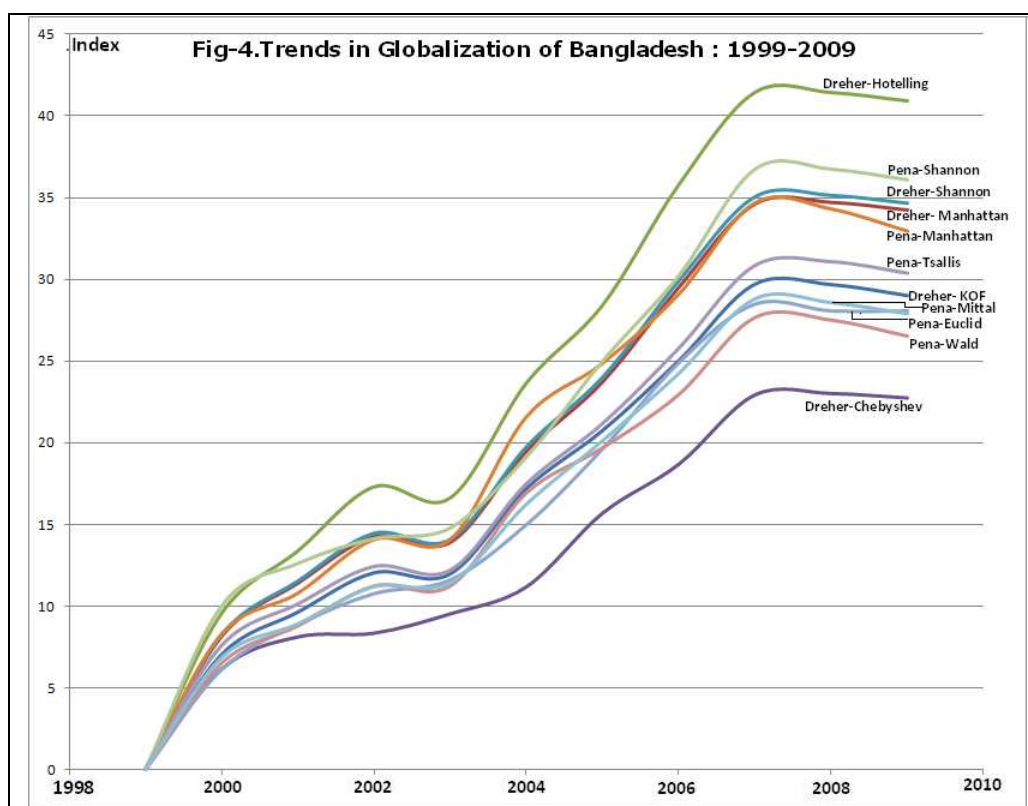
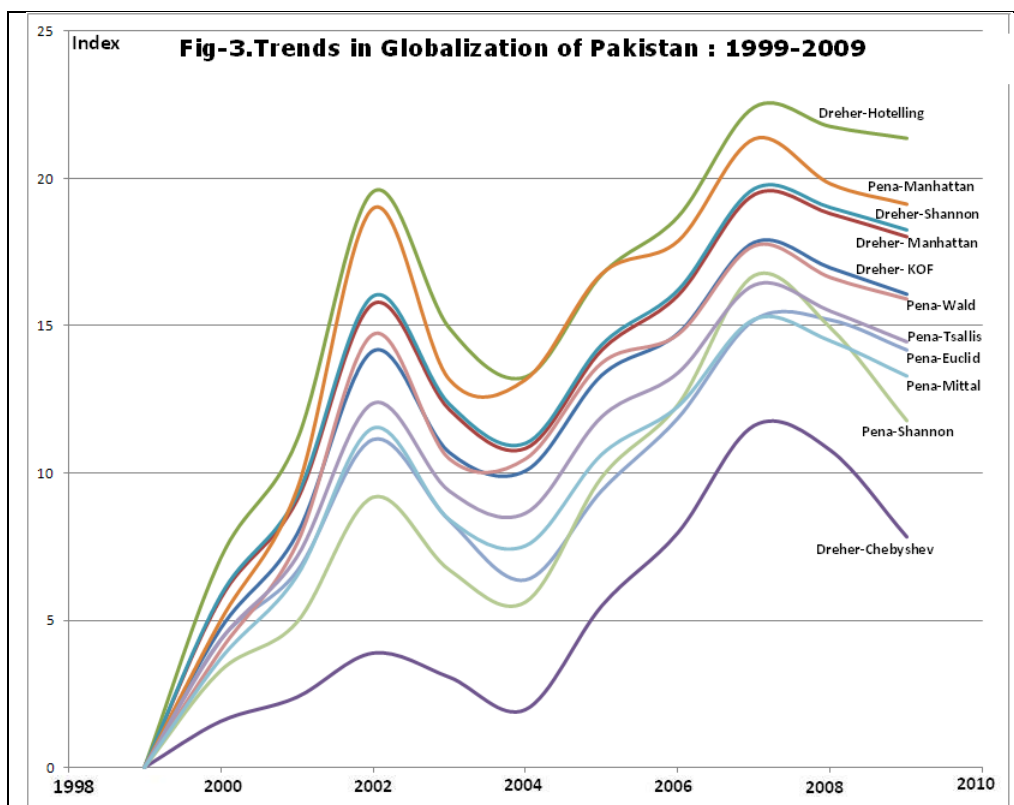
Table-6. Dreher-KOF Indicators and Indices of Globalization of India and its Neighboring Countries in 1999									
Country	ECO-1	Eco-2	ECO	SOC-1	SOC-2	SOC-3	SOC	POL-1	Overall
Bangladesh	13.15	26.47	19.81	18.44	22.05	1.76	14.58	72.09	31.57
China	43.93	37.28	40.60	12.69	41.58	72.50	41.25	77.47	50.51
India	27.81	31.77	29.79	15.87	33.99	30.78	26.86	86.61	43.60
Pakistan	36.01	31.07	33.54	28.47	27.92	30.57	28.96	83.57	44.95

In Fig-1 through Fig-4, we have presented the 11-years trends of globalization in all the four countries. The overall index of globalization (all 11 indices, including the Dreher-KOF index) in the base year (1999) is considered as 100 and increase (in the percentage of index value over the base) in the subsequent years are graphically presented.

We observe that increase in globalization of India and Bangladesh has been more or less steady, while in China and Pakistan sever fluctuations are observed. From a lower start, Bangladesh is picking up faster than the other countries. After 2007, globalization of all the four countries has stagnated; in case of Pakistan and Bangladesh it has shown decline as well.

During the years 2003 and 2004, the process of globalization slowed down or experienced a retraction in all the four countries; more violently in Pakistan and most mildly in China. Many factors, including the recession in Europe, political events in the South-East Asia, particularities of the four countries (India, China, Pakistan and Bangladesh) in matters of socio-economic and political relationship with the European countries and the US, effectiveness of the policies adopted for containing the recession effects and the internal socio-economic and political environment have been responsible for the said severity or mildness faced by the globalization process in those countries.





VI. Concluding Remarks: This study has provided sufficient indications that among various methods (some old and others new) the Dreher-Chebyshev index is a very reliable measure of globalization that has some sort of middle-position stability. Possibly, two alternative indices, the Pena-Shannon and the Pena-Wald indices, may vie with it in this regard.

This study opens a number of issues that invite further research. Some of them are enumerated below:

- In this study we have used the Particle Swarm optimization method with suitable modifications to solve combinatorial and combinatorial-cum-real optimization problems. Yet, other methods of global optimization (such as the Differential Evolution) with suitable modifications (for handling combinatorial optimization) and/or hybridization with other global optimization methods (such as the Tabu Search method) may prove to be better solvers.
- We have compared the positional stability of different indicators with only four cases and conjectured that the Pena-Wald and the Pena-Tsallis indices may vie with the Dreher-KOF index of globalization. It may be noted that this observation is based on the absolute values of the indices. Thus, this conjecture may or may not be corroborated if many more cases are studied or the standardized indices are compared. We require, therefore, a further investigation in this regard.
- Each of the alternative index that we have constructed, is synthesized at a single stage. However, the Dreher-KOF index is synthesized at two stages. It would be fruitful to investigate into the behavior of the alternative indicators constructed at two stages.
- We should also investigate if one could use the same methodology of (linear) aggregation at both stages or one may use different methods of synthesis at different stages.

References

- Bauman, Z. (1998): *Globalization: The Human Consequences*, Columbia University Press, New York.
- Bhagwati, J. (2004): *In Defense of Globalization*, Oxford University Press, New York.
- Chen, C. (2011): "Foreign Direct Investment in China: Performance, Characteristics, and Prospects" in Yin-Wong Cheung, Y-W, Kakkar, V. & Ma, G. (eds) *The Evolving Role of Asia in Global Finance*, Frontiers of Economics and Globalization, Volume 9, Emerald, Bingley (UK): 341-368.
- Dreher, A. (2006): "Does Globalization Affect Growth? Evidence from a new Index of Globalization", *Applied Economics*, 38(10): 1091-1110.
- Dreher, A., Gaston, N. & Martens, P. (2008): *Measuring Globalisation – Gauging its Consequences*, Springer, New York.
- Esteban, M.D. & Morales, D. (1995): "A Summary of Entropy Statistics", *Kybernetika*, 31(4): 337-346.

Fan, J.P.H., Morck, R., Xu, L.C., & Yeung, B. (2007): "Does 'Good Government' Draw Foreign Capital? Explaining China's Exceptional Foreign Direct Investment Inflow", *World Bank Policy Research Working Paper* 4206 (2007). <http://EconPapers.repec.org/RePEc:wbk:wbrwps:4206>

Hotelling, H. (1933): "Analysis of a Complex of Statistical Variables with Principal Components", *Journal of Educational Psychology*, 24(7): 498-520.

Jha, S.C. (1963): *Studies in the Development of Capitalism in India*, Firma K. L. Mukhopadhyay, Calcutta.

KOF (2012): KOF Index of Globalization, <http://globalization.kof.ethz.ch/>

Mishra, S.K. (1984): "Taxonomical Analysis of Regional Development by Outranking Relations on Multiple Principal Components", *Hill Geographer* (Geographical Society of the North-Eastern Hill Region, Shillong, India), 3(1): 20-28. http://mpa.ub.uni-muenchen.de/8989/1/MPRA_paper_8989.pdf

Mishra, S.K. (2004): "Multicollinearity and Maximum Entropy Leuven Estimator." *Economics Bulletin*, 3(25): 1-11.

Mishra, S.K. (2010): "Construction of an Index: A New Method", in *Growth and Human Development in North-East India*, Nayak, P. (ed.), Oxford University Press: 24-35.

Mishra, S.K. (2011): "A Comparative Study of Various Inclusive Indices and the Index Constructed by the Principal Component Analysis", *IUP Journal of Computational Mathematics*, 4(2): 7-26.

Mishra, S.K. (2012a): "A Note on the Indeterminacy and Arbitrariness of Pena's Method of Construction of Synthetic Indicators", SSRN: <http://dx.doi.org/10.2139/ssrn.2026293>

Mishra, S.K. (2012b): "A Note on Construction of Heuristically Optimal Pena's Synthetic Indicators by the Particle Swarm Method of Global Optimization", SSRN: <http://dx.doi.org/10.2139/ssrn.2028395>

Mishra, S.K. (2012c): "A Maximum Entropy Perspective of Pena's Synthetic Indicators", SSRN: <http://dx.doi.org/10.2139/ssrn.2032479>

Mishra, S.K. & Nayak, P. (2006): "Socio-economic Dimensions of Globalization in India", SSRN: <http://dx.doi.org/10.2139/ssrn.899709>

Paris, Q. (2001): "Multicollinearity and Maximum Entropy Estimator", *Economics Bulletin*, 3(11): 1-9.

Pena, J. B. (1977): "Problemas de la medición del bienestar y conceptos afines. Una aplicación al Caso Español". I.N.E.: Madrid.

Somarriba, N. & Pena, B. (2009): "Synthetic Indicators of Quality of Life in Europe", *Social Indicators Research*, 94(1): 115-133.

Wald, A. (1950): *Statistical Decision Functions*, John Wiley, New York.

APPENDIX

Table-A-00. Dreher-KOF Index of Globalization

Country	Code	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Angola	AGO	44.03	43.82	44.41	44.21	44.87	44.25	45.68	46.30	47.65	45.56	44.42
Albania	ALB	39.86	39.91	43.36	46.03	47.04	47.48	48.53	50.93	53.27	55.44	58.43
Argentina	ARG	64.06	64.36	62.28	63.02	61.72	62.23	60.33	60.17	60.17	59.85	58.94
Armenia	ARM	44.34	47.23	47.42	46.23	47.61	49.46	51.53	52.73	52.78	52.98	54.27
Australia	AUS	80.16	81.33	81.55	80.99	81.47	81.13	80.78	81.56	82.05	80.29	81.60
Austria	AUT	88.24	90.21	90.25	89.79	90.12	89.74	90.30	90.37	91.87	91.10	90.55
Azerbaijan	AZE	41.33	45.15	46.24	48.58	50.45	52.96	56.25	56.49	58.49	57.64	56.92
Burundi	BDI	23.82	25.84	25.46	25.06	26.75	27.56	28.50	29.13	34.58	34.39	34.93
Belgium	BEL	91.82	92.72	92.38	92.31	92.25	92.17	91.96	92.14	92.78	92.84	92.76
Benin	BEN	35.49	36.71	37.04	36.67	37.43	40.49	40.57	41.45	45.73	44.42	44.28
Burkina Faso	BFA	38.71	38.65	38.59	39.13	40.03	40.41	41.34	42.15	43.12	43.43	44.88
Bangladesh	BGD	31.57	33.79	34.61	35.37	35.35	37.00	38.12	39.47	40.95	40.94	40.73
Bulgaria	BGR	63.55	65.31	65.44	64.69	66.80	69.21	67.73	71.41	75.07	74.43	72.50
Bahrain	BHR	66.11	66.44	67.37	67.80	68.34	68.35	67.57	68.12	68.29	68.43	68.83
Bahamas, The	BHS	51.31	51.47	51.74	50.48	50.27	51.09	51.92	51.75	52.45	51.19	51.47
Bosnia & Herzegovina	BIH	46.78	52.12	53.27	53.39	54.39	56.61	56.21	61.87	63.60	62.26	61.86
Belize	BLZ	45.93	47.11	48.22	47.23	48.08	47.84	48.79	49.14	48.23	48.12	48.25
Bolivia	BOL	55.48	55.52	54.81	52.33	52.78	54.39	54.90	55.37	54.66	54.38	53.79
Brazil	BRA	56.44	55.93	58.42	58.60	57.66	58.65	59.04	58.80	59.70	58.72	59.36
Barbados	BRB	50.13	50.43	51.09	52.11	52.48	52.55	56.63	57.62	58.14	54.87	56.55
Botswana	BWA	47.56	49.93	49.54	51.27	51.25	50.56	49.15	53.63	54.39	51.40	52.22
Central African Rep	CAF	26.04	27.07	27.21	26.79	26.87	26.81	31.63	34.96	32.33	33.40	35.94
Canada	CAN	87.88	88.35	87.93	87.46	86.85	86.87	86.01	86.25	86.34	86.10	85.53
Switzerland	CHE	89.89	91.11	90.31	89.88	89.61	87.37	87.85	87.41	87.89	86.33	86.64
Chile	CHL	66.02	67.43	69.40	68.67	69.99	71.96	72.79	73.08	74.41	74.18	73.31
China	CHN	50.51	51.56	54.32	55.31	56.18	58.39	60.53	59.43	60.54	59.35	59.37
Cote d'Ivoire	CIV	43.22	43.75	43.76	45.03	44.70	44.90	45.16	46.06	47.91	47.77	47.87
Cameroon	CMR	39.67	39.46	39.22	41.38	41.43	44.32	43.68	42.71	44.44	45.52	45.81
Colombia	COL	50.21	50.36	51.32	51.34	53.08	53.36	52.87	56.73	57.46	56.04	56.32
Costa Rica	CRI	61.38	61.24	60.18	60.14	62.34	58.80	61.70	63.27	64.84	63.66	63.09
Cyprus	CYP	64.97	66.09	67.21	67.46	69.67	76.46	76.33	76.91	87.33	86.94	86.59
Czech Republic	CZE	78.55	80.04	81.39	82.39	82.33	84.62	85.40	85.35	86.48	86.01	85.76
Germany	DEU	79.96	81.71	81.47	82.13	82.17	82.00	82.22	82.47	83.03	82.09	81.53
Denmark	DNK	87.53	89.78	89.78	89.08	89.05	88.87	89.65	89.37	90.03	89.34	88.11
Dominican Republic	DOM	45.95	52.20	54.46	51.29	51.68	56.12	56.28	59.20	60.50	55.41	55.07
Algeria	DZA	48.46	50.02	49.37	51.42	51.81	53.21	54.42	54.59	49.23	52.19	54.88
Ecuador	ECU	53.07	53.87	53.00	52.76	56.82	58.14	58.45	58.08	57.85	55.46	54.16
Egypt, Arab Rep.	EGY	53.33	53.98	54.52	54.60	53.94	55.24	57.81	58.53	59.51	59.16	59.35
Spain	ESP	82.80	84.34	84.79	84.46	84.78	84.07	84.68	84.94	85.55	85.01	84.36
Estonia	EST	71.95	73.50	74.25	74.66	75.36	77.18	77.29	78.66	79.59	79.87	79.34
Ethiopia	ETH	30.64	31.84	32.37	32.22	37.15	39.30	39.41	39.43	39.31	38.26	37.21
Finland	FIN	85.97	87.25	87.14	86.25	85.90	86.77	85.18	85.68	86.63	85.70	84.34
Fiji	FJI	54.13	52.15	54.68	54.83	55.10	55.31	55.33	57.56	56.83	55.69	53.90
France	FRA	81.42	83.39	82.27	82.55	82.74	83.85	83.45	84.04	84.69	84.34	84.12
United Kingdom	GBR	86.44	87.05	86.58	86.53	86.91	85.97	86.46	86.16	85.99	85.62	85.54
Georgia	GEO	43.46	45.18	46.42	47.16	48.32	50.73	50.67	54.27	59.60	61.08	60.57
Ghana	GHA	45.80	49.69	49.77	50.91	53.00	55.38	54.30	52.40	54.12	52.36	54.94
Greece	GRC	73.76	74.92	79.16	78.82	80.11	80.60	80.02	80.87	82.33	82.47	81.30
Guatemala	GTM	49.18	49.27	50.50	50.92	50.88	57.28	59.27	60.43	61.24	61.18	60.86
Guyana	GYU	55.09	59.17	60.82	55.94	55.64	54.78	54.05	58.30	56.63	54.36	53.19
Honduras	HND	53.36	53.63	54.14	56.35	57.78	58.23	59.21	60.76	61.65	62.17	61.44
Croatia	HRV	62.65	62.94	64.50	66.29	68.68	72.92	73.68	74.62	76.09	75.96	75.88

Hungary	HUN	80.50	80.88	81.95	80.93	80.92	84.63	85.29	86.57	86.91	86.91	87.38
Indonesia	IDN	53.20	53.61	53.38	50.67	51.55	54.48	56.75	57.48	57.18	56.45	56.26
India	IND	43.60	44.76	45.46	46.16	47.21	47.43	49.41	50.93	52.02	51.98	51.88
Ireland	IRL	85.85	86.76	87.23	86.31	86.26	86.00	86.89	86.19	86.48	86.02	91.95
Iran, Islamic Rep.	IRN	33.72	35.56	35.56	40.66	41.54	38.44	38.84	40.99	39.08	39.07	40.69
Iceland	ISL	76.37	77.59	77.86	76.87	77.96	73.00	72.71	72.83	73.07	77.49	72.96
Israel	ISR	66.50	67.67	71.65	72.00	72.29	72.59	73.52	73.43	74.02	77.38	77.23
Italy	ITA	80.50	81.82	81.21	81.05	80.74	81.45	81.29	81.16	81.85	81.35	81.02
Jamaica	JAM	58.80	59.66	58.05	57.25	58.83	65.67	61.53	62.83	63.88	63.33	61.34
Jordan	JOR	64.05	65.76	67.09	67.27	68.08	68.22	69.65	69.98	71.70	71.55	70.48
Japan	JPN	57.35	58.43	58.25	58.29	59.77	60.07	60.43	65.32	65.86	64.07	64.13
Kazakhstan	KAZ	46.13	49.94	51.27	51.90	52.70	53.24	54.83	54.54	58.16	58.05	59.12
Kenya	KEN	43.27	43.96	44.46	45.47	46.20	47.11	47.14	47.42	48.44	47.96	49.39
Kyrgyz Republic	KGZ	50.76	53.55	52.25	51.56	49.41	51.93	52.38	56.63	58.74	56.56	56.12
Korea, Rep.	KOR	57.31	58.47	60.56	59.93	59.99	61.09	60.12	61.05	63.03	62.83	62.39
Kuwait	KWT	68.61	67.48	67.74	67.48	67.59	67.96	68.54	69.36	71.04	70.44	71.42
Sri Lanka	LKA	42.60	49.23	50.03	49.73	51.32	50.02	50.58	52.42	52.81	51.67	50.15
Lesotho	LSO	40.43	40.86	40.23	41.78	41.60	41.59	41.44	41.14	41.16	46.54	41.99
Lithuania	LTU	57.91	59.13	61.11	62.32	63.18	64.94	66.32	67.32	68.86	69.80	66.56
Luxembourg	LUX	79.19	79.48	80.00	80.76	81.24	82.04	80.93	80.60	86.10	85.93	86.02
Latvia	LVA	60.08	61.11	62.67	63.49	64.61	67.46	68.30	70.20	70.65	69.85	66.27
Morocco	MAR	46.72	51.70	54.49	55.85	57.26	55.79	58.87	58.54	60.26	60.33	60.99
Moldova	MDA	50.28	52.52	52.11	51.76	57.27	57.14	56.99	59.35	61.98	61.48	60.94
Madagascar	MDG	29.98	31.81	33.34	33.06	34.01	42.35	40.52	42.41	42.90	43.68	43.87
Mexico	MEX	57.89	58.45	57.55	57.79	57.28	57.14	59.32	58.54	58.85	58.71	59.96
Macedonia, FYR	MKD	40.94	45.02	46.13	48.36	48.75	49.23	53.61	53.36	62.76	60.49	59.72
Mali	MLI	36.76	37.16	39.58	42.61	43.52	44.39	43.47	46.31	44.75	44.95	46.52
Malta	MLT	67.27	67.37	66.34	69.04	68.90	74.33	74.31	75.48	76.19	76.08	76.39
Mongolia	MNG	38.36	39.53	39.69	44.77	46.23	46.36	48.12	51.01	50.73	51.36	54.98
Mozambique	MOZ	42.02	44.14	44.58	45.90	44.53	47.35	48.23	48.69	49.33	48.79	48.98
Mauritania	MRT	37.04	38.70	39.29	39.64	39.71	40.83	41.82	41.98	45.14	51.19	49.25
Mauritius	MUS	50.63	50.38	55.63	53.15	57.26	56.17	61.97	66.45	68.17	68.72	63.39
Malawi	MWI	35.54	35.67	38.09	38.09	39.13	40.12	39.68	39.90	41.01	43.80	40.70
Malaysia	MYS	73.41	74.04	75.58	76.27	75.78	76.79	76.34	77.28	77.55	77.16	77.43
Namibia	NAM	52.17	52.70	53.72	55.24	53.74	56.72	55.38	54.11	56.71	56.42	55.70
Niger	NER	31.55	32.45	31.78	32.45	32.47	33.32	33.73	36.15	35.02	35.51	38.20
Nigeria	NGA	51.08	52.47	52.14	51.39	53.26	52.71	54.47	55.72	58.44	57.77	58.01
Nicaragua	NIC	51.21	52.88	52.38	53.16	54.42	53.82	52.30	54.53	54.88	54.26	55.11
Netherlands	NLD	91.13	91.82	91.39	90.44	91.29	90.53	90.52	91.00	91.94	91.50	90.94
Norway	NOR	82.65	83.16	82.97	81.75	83.32	81.70	80.36	81.76	82.56	82.29	83.19
Nepal	NPL	31.97	35.83	36.24	36.62	34.77	35.13	36.84	37.01	36.87	36.86	37.44
New Zealand	NZL	78.57	80.40	79.91	79.62	78.62	78.74	78.49	79.23	79.16	79.33	78.31
Oman	OMN	56.25	57.54	59.70	55.54	55.60	56.79	58.12	58.31	60.89	60.71	61.80
Pakistan	PAK	44.95	47.07	48.51	51.31	49.76	49.48	50.94	51.58	52.97	52.58	52.18
Panama	PAN	63.01	64.02	64.66	62.95	63.59	64.50	64.29	65.31	66.57	67.31	68.24
Peru	PER	51.21	56.57	56.75	56.44	57.36	58.81	60.27	61.73	64.30	64.85	64.53
Philippines	PHL	54.33	56.09	57.03	57.37	56.62	59.59	59.14	58.87	58.09	56.50	56.70
Papua New Guinea	PNG	41.48	40.34	40.40	43.65	43.51	42.14	41.91	43.25	47.96	47.27	46.67
Poland	POL	71.64	72.74	71.77	72.88	75.10	79.72	78.18	79.97	81.01	79.74	80.81
Portugal	PRT	78.78	80.76	81.72	80.65	81.21	86.30	85.72	86.42	87.29	86.98	86.73
Paraguay	PRY	45.43	46.80	52.39	51.67	52.47	54.64	55.45	56.19	56.50	55.79	57.53
Romania	ROM	58.84	60.05	60.14	60.96	61.85	65.12	67.00	66.61	75.87	75.32	74.94
Russian Federation	RUS	57.81	63.80	64.95	66.30	66.94	66.85	67.06	67.00	68.02	65.66	67.35
Rwanda	RWA	25.39	26.60	28.91	29.26	29.83	30.61	33.48	34.56	36.08	38.31	39.54
Senegal	SEN	46.35	47.82	46.53	49.46	50.27	51.19	49.80	51.49	52.57	53.10	54.48
Singapore	SGP	85.12	85.61	87.14	86.92	87.85	86.98	82.46	87.38	88.44	89.15	89.18

Sierra Leone	SLE	28.49	30.08	29.40	29.94	30.34	37.99	37.90	37.45	38.26	37.87	38.56
El Salvador	SLV	55.97	56.42	57.53	59.21	59.57	61.48	61.23	62.85	63.59	64.56	63.71
Serbia	SRB	47.50	51.38	51.69	59.75	63.71	64.29	58.33	66.46	68.01	68.71	68.39
Slovak Republic	SVK	70.26	72.89	74.02	72.81	72.99	80.63	82.36	83.41	83.86	84.05	83.83
Slovenia	SVN	65.98	67.97	69.33	70.03	72.43	75.97	75.77	76.94	79.05	79.37	77.67
Sweden	SWE	88.10	88.66	88.21	88.49	88.45	88.80	88.95	88.90	88.81	88.47	88.23
Syrian Arab Republic	SYR	35.74	36.63	36.60	37.33	37.92	40.12	40.44	41.99	42.46	42.00	42.78
Chad	TCO	30.36	25.59	27.41	33.07	33.17	39.03	38.78	39.84	39.99	39.24	40.99
Togo	TGO	46.08	43.30	40.05	39.44	43.41	44.86	47.42	48.65	48.75	47.53	47.94
Thailand	THA	55.44	58.05	60.36	59.88	59.27	60.39	61.26	62.43	62.72	62.37	64.15
Trinidad and Tobago	TTO	59.33	60.01	61.61	56.98	56.65	55.39	57.13	57.81	57.55	57.78	58.34
Tunisia	TUN	54.43	55.25	56.27	56.97	57.00	57.93	60.08	59.20	60.11	60.17	59.52
Turkey	TUR	60.45	61.42	62.83	61.66	62.59	63.40	69.49	67.76	68.70	68.87	69.99
Tanzania	TZA	30.25	31.38	31.78	32.94	34.69	36.67	37.51	37.86	39.64	38.76	39.42
Uganda	UGA	32.81	34.25	35.61	36.04	38.52	45.18	43.12	44.10	45.78	46.97	47.62
Ukraine	UKR	56.74	59.32	59.62	59.83	60.55	61.87	63.18	63.97	65.92	67.27	68.48
Uruguay	URY	60.94	61.55	61.83	60.02	62.00	63.32	64.30	64.41	65.02	65.69	65.71
United States	USA	76.38	76.87	76.11	75.09	75.55	76.25	76.30	77.08	77.54	76.40	74.88
Venezuela, RB	VEN	59.72	59.93	59.54	59.21	60.74	56.96	57.14	56.09	54.45	53.12	50.90
Vietnam	VNM	36.51	38.14	38.78	39.94	40.72	42.29	43.09	45.14	47.41	48.56	46.99
South Africa	ZAF	60.08	61.56	63.21	63.34	62.92	62.35	63.26	64.16	65.32	65.38	64.42
Zambia	ZMB	50.41	52.48	52.46	53.55	53.23	56.22	54.42	55.88	56.57	55.01	53.78
Zimbabwe	ZWE	45.46	46.69	46.14	45.4	46.95	46.88	46.32	47.97	47.66	48.92	50.89

Table-A-01. Dreher-Manhattan Index of Globalization

Country	Code	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Angola	AGO	102.90	102.87	104.43	104.53	106.09	105.12	108.81	110.63	113.89	108.45	105.96
Albania	ALB	93.95	93.97	102.83	110.20	111.82	111.68	114.55	120.38	126.13	131.47	138.14
Argentina	ARG	149.39	150.12	144.83	146.38	142.85	144.39	140.06	139.47	139.17	139.19	137.11
Armenia	ARM	110.19	118.90	119.44	115.04	117.64	122.06	127.86	130.24	129.41	130.56	133.39
Australia	AUS	192.54	194.83	195.34	194.36	195.45	194.50	193.22	194.55	195.36	190.99	194.03
Austria	AUT	210.71	215.53	215.65	214.68	215.58	214.61	216.42	216.69	220.62	218.63	217.38
Azerbaijan	AZE	99.82	109.02	111.45	117.45	121.68	128.64	137.92	138.04	142.69	140.48	139.09
Burundi	BDI	58.16	63.68	62.91	62.17	66.62	68.94	71.35	72.56	82.76	82.14	83.89
Belgium	BEL	220.94	223.32	222.36	222.44	222.29	222.22	221.81	221.91	223.34	223.46	223.33
Benin	BEN	80.75	83.54	84.30	83.86	85.41	92.05	92.06	93.90	107.09	103.20	101.97
Burkina Faso	BFA	88.06	88.20	87.37	88.77	91.06	91.89	93.94	95.84	98.31	99.01	102.41
Bangladesh	BGD	67.84	73.36	75.57	77.51	77.26	81.04	83.92	87.84	91.30	91.37	91.05
Bulgaria	BGR	149.69	154.27	154.70	153.31	158.54	164.12	161.05	169.91	178.98	177.49	173.19
Bahrain	BHR	168.52	169.29	171.57	172.54	173.64	172.99	170.27	171.62	171.56	171.47	172.19
Bahamas, The	BHS	130.70	130.99	132.71	130.15	129.33	131.44	133.08	132.44	133.92	130.88	131.40
Bosnia & Herzegovina	BIH	117.75	128.17	129.90	130.37	132.78	138.07	137.06	149.77	153.74	150.16	149.36
Belize	BLZ	118.99	121.51	123.72	121.73	123.76	122.44	124.40	124.90	122.75	122.52	121.99
Bolivia	BOL	129.18	128.55	126.95	121.02	122.08	125.88	127.22	128.31	127.04	126.33	125.04
Brazil	BRA	129.26	127.99	133.54	133.71	131.47	133.39	134.09	133.64	135.87	134.16	135.74
Barbados	BRB	135.70	136.76	138.38	141.76	142.91	142.88	152.30	154.83	155.76	147.60	150.74
Botswana	BWA	118.33	124.44	123.18	127.54	127.38	125.42	122.49	130.34	131.50	125.34	126.42
Central African Rep	CAF	60.14	62.93	63.55	63.29	63.39	63.75	72.67	80.22	74.15	77.15	83.18
Canada	CAN	211.96	213.16	212.03	210.92	209.25	209.28	207.36	207.88	208.11	207.43	206.01
Switzerland	CHE	216.53	219.56	217.71	216.66	215.92	210.84	211.97	210.93	211.99	208.43	208.96
Chile	CHL	155.41	159.01	163.44	161.11	164.28	168.85	171.08	171.94	175.13	174.12	171.89
China	CHN	114.29	117.30	123.65	126.46	128.46	133.78	139.25	136.52	139.09	136.14	136.27
Cote d'Ivoire	CIV	104.83	106.75	106.14	110.25	109.33	109.83	109.71	111.89	116.21	115.69	115.92
Cameroon	CMR	93.64	93.12	92.02	96.57	96.46	102.13	101.37	97.54	102.77	105.78	104.74
Colombia	COL	118.68	119.03	121.45	121.72	125.88	126.59	125.42	132.43	134.11	131.04	131.26
Costa Rica	CRI	148.87	148.67	146.15	146.78	151.60	143.27	150.51	154.71	158.13	155.78	153.83

Cyprus	CYP	162.95	165.76	168.43	169.28	174.40	190.89	190.36	191.75	213.92	212.84	211.88
Czech Republic	CZE	190.35	193.79	196.74	199.05	199.22	204.87	207.26	207.77	209.75	208.55	207.99
Germany	DEU	190.92	195.10	194.64	196.26	196.24	196.00	196.69	197.19	198.21	196.21	194.77
Denmark	DNK	209.12	215.10	215.28	213.42	213.88	213.23	215.33	214.82	216.23	214.68	211.60
Dominican Republic	DOM	111.86	124.62	129.62	124.41	125.70	133.76	133.83	140.40	143.38	133.78	133.02
Algeria	DZA	112.19	116.56	114.53	119.52	120.32	123.60	126.67	126.77	116.44	120.73	128.06
Ecuador	ECU	126.61	128.81	126.78	126.88	134.03	136.44	136.91	135.73	134.96	128.50	125.56
Egypt, Arab Rep.	EGY	121.05	123.07	124.52	125.07	123.49	126.87	132.99	134.77	137.18	136.40	136.81
Spain	ESP	197.70	201.50	202.85	202.15	203.03	201.43	202.68	203.24	204.43	203.35	201.27
Estonia	EST	176.95	180.95	182.55	183.68	185.12	188.85	188.89	193.06	195.34	195.64	194.30
Ethiopia	ETH	66.40	69.99	71.35	71.05	80.21	85.64	85.39	85.53	84.99	82.31	79.86
Finland	FIN	205.59	208.85	208.56	206.81	205.68	207.36	204.10	205.10	207.39	205.41	201.70
Fiji	FJI	128.08	123.43	129.80	130.86	130.36	131.37	131.77	137.78	135.83	133.58	128.72
France	FRA	193.90	198.85	196.35	196.94	197.50	199.95	199.22	200.49	202.18	201.54	201.12
United Kingdom	GBR	206.57	207.93	206.82	206.77	207.82	205.69	207.05	206.18	205.79	204.89	204.52
Georgia	GEO	108.27	112.07	115.10	117.01	119.32	125.30	124.95	132.95	145.13	148.18	146.91
Ghana	GHA	107.30	118.04	117.58	120.25	124.21	129.17	127.30	121.73	125.83	120.65	129.02
Greece	GRC	176.31	178.94	188.01	187.35	190.45	191.69	190.65	192.46	196.00	196.41	193.64
Guatemala	GTM	116.87	116.04	119.57	120.78	120.92	133.65	137.76	140.13	141.95	141.79	140.95
Guyana	GUY	137.13	145.64	149.67	138.67	137.66	135.73	133.15	142.54	138.61	134.93	131.81
Honduras	HND	125.49	125.75	126.73	132.85	135.96	137.07	140.05	143.54	145.33	146.75	145.10
Croatia	HRV	153.91	154.68	158.07	162.14	167.72	177.13	179.01	181.07	184.37	184.05	183.89
Hungary	HUN	191.86	192.54	194.85	192.38	192.26	201.08	203.55	207.21	207.98	208.00	208.97
Indonesia	IDN	120.35	121.07	120.54	113.69	115.36	122.61	127.97	129.24	128.57	126.65	126.11
India	IND	95.59	98.22	99.93	101.75	104.33	104.78	109.14	113.68	116.05	115.79	115.72
Ireland	IRL	207.83	209.91	211.09	209.00	208.98	207.98	210.65	209.35	209.37	208.65	222.85
Iran, Islamic Rep.	IRN	79.12	83.60	83.81	94.44	96.55	91.17	91.71	95.75	91.72	91.60	94.97
Iceland	ISL	185.72	188.58	189.48	187.15	190.19	181.28	180.79	179.78	180.32	188.40	177.46
Israel	ISR	161.69	164.45	173.49	174.07	174.48	175.55	177.50	177.17	178.77	184.05	183.21
Italy	ITA	189.91	193.28	191.88	191.67	191.31	193.03	192.39	191.75	193.15	192.00	191.06
Jamaica	JAM	143.95	146.00	141.67	139.76	144.74	158.19	149.23	152.16	155.09	153.61	149.04
Jordan	JOR	153.40	156.15	159.51	159.71	161.72	162.11	165.30	166.63	171.46	171.58	168.88
Japan	JPN	137.01	139.92	139.37	138.90	142.86	143.50	144.67	156.24	157.41	152.33	152.48
Kazakhstan	KAZ	113.94	122.92	126.05	127.68	129.59	131.17	135.23	134.01	139.99	139.60	141.74
Kenya	KEN	97.29	98.89	100.08	102.36	102.97	106.11	106.12	106.21	109.73	107.76	111.07
Kyrgyz Republic	KGZ	120.47	127.06	124.10	122.42	117.59	124.91	126.09	136.66	141.79	136.40	135.32
Korea, Rep.	KOR	134.66	137.57	142.26	140.64	140.79	143.72	140.90	143.00	147.26	147.10	146.08
Kuwait	KWT	169.47	166.34	167.28	166.89	167.11	167.60	168.58	170.63	174.39	173.13	175.43
Sri Lanka	LKA	101.85	114.76	116.45	115.67	119.11	116.63	117.59	121.83	122.75	120.25	115.65
Lesotho	LSO	100.85	101.89	98.83	102.45	101.72	101.84	100.44	100.28	100.34	110.29	102.06
Lithuania	LTU	144.35	147.41	152.12	155.58	157.42	161.17	164.76	167.32	170.58	171.64	163.90
Luxembourg	LUX	196.28	197.04	198.35	201.22	202.18	204.22	201.71	200.75	211.00	210.66	210.93
Latvia	LVA	150.83	153.37	157.28	159.33	162.00	168.37	170.31	174.67	174.99	172.84	163.97
Morocco	MAR	111.04	121.23	127.14	130.19	133.32	129.74	137.79	136.46	141.04	141.58	143.28
Moldova	MDA	125.40	131.54	131.22	130.39	141.49	141.06	140.15	145.38	151.55	150.53	150.13
Madagascar	MDG	70.90	74.83	78.16	77.27	79.20	96.63	92.83	97.51	98.68	100.68	101.37
Mexico	MEX	137.22	138.93	136.70	137.70	135.81	135.68	140.91	139.24	139.48	139.12	142.57
Macedonia, FYR	MKD	105.44	116.96	119.35	124.85	125.41	126.77	137.00	136.99	157.16	151.54	149.16
Mali	MLI	81.74	83.10	88.91	96.02	97.66	99.60	97.62	104.28	100.66	101.75	105.84
Malta	MLT	170.44	170.52	168.25	175.10	174.66	186.73	186.69	189.36	190.80	190.40	190.50
Mongolia	MNG	90.39	94.43	94.36	103.77	106.88	107.40	111.39	118.26	117.49	118.82	126.87
Mozambique	MOZ	98.03	102.92	102.39	105.16	102.17	108.61	110.23	111.08	112.27	110.81	112.52
Mauritania	MRT	89.64	94.01	95.22	96.42	96.35	98.87	101.30	101.57	109.92	121.61	117.50
Mauritius	MUS	127.38	126.76	139.41	133.98	141.08	139.08	152.49	162.99	167.04	168.73	157.99
Malawi	MWI	85.71	85.85	91.49	91.43	93.62	95.76	94.63	94.74	96.99	102.90	95.05
Malaysia	MYS	176.79	178.44	182.21	182.98	181.52	183.64	182.47	184.59	185.13	184.41	184.68
Namibia	NAM	129.91	131.90	134.03	137.13	132.90	139.68	135.71	132.25	138.50	138.30	136.86
Niger	NER	67.81	69.69	68.74	70.17	70.28	71.90	72.94	78.95	75.97	77.56	83.33
Nigeria	NGA	112.68	115.57	114.13	113.55	118.05	117.04	121.63	124.73	131.23	130.01	131.04

Nicaragua	NIC	122.10	126.25	125.00	127.20	130.47	129.48	125.37	131.01	131.07	129.71	131.82
Netherlands	NLD	218.17	219.74	218.78	216.90	218.92	217.42	217.78	218.72	220.77	220.16	218.76
Norway	NOR	197.58	198.62	198.03	195.50	199.30	195.86	192.69	196.02	197.88	197.27	199.21
Nepal	NPL	70.81	82.38	82.99	83.34	77.16	77.75	81.43	81.92	81.79	81.93	83.02
New Zealand	NZL	191.33	195.31	194.03	193.45	191.26	191.68	191.07	192.83	192.28	192.58	189.49
Oman	OMN	139.69	142.22	149.32	138.14	137.98	141.18	143.61	144.19	150.25	149.01	152.35
Pakistan	PAK	99.62	105.34	108.66	115.31	111.73	110.42	113.75	115.60	119.01	118.36	117.58
Panama	PAN	153.58	156.02	157.40	153.21	154.87	157.09	156.69	158.65	161.49	163.35	165.83
Peru	PER	119.47	129.87	130.45	130.27	132.50	135.26	138.67	141.91	148.11	149.43	148.52
Philippines	PHL	125.44	128.80	131.26	132.66	130.66	136.89	135.61	134.95	132.94	129.04	129.36
Papua New Guinea	PNG	103.73	99.69	101.94	110.87	109.64	106.16	105.59	108.36	118.81	116.74	115.72
Poland	POL	170.41	172.60	170.28	173.07	178.56	189.82	186.17	190.93	193.20	189.96	192.72
Portugal	PRT	189.30	193.76	195.88	193.41	194.89	207.52	206.65	208.14	209.81	209.07	208.39
Paraguay	PRY	107.88	112.04	122.54	120.27	121.77	126.60	128.73	130.52	131.24	129.75	133.97
Romania	ROM	137.52	140.39	140.58	142.48	144.67	152.52	157.25	157.02	178.69	177.45	176.60
Russian Federation	RUS	138.69	152.89	155.51	158.83	160.57	160.17	160.45	160.44	162.33	156.55	160.29
Rwanda	RWA	60.48	63.25	68.80	69.90	71.16	72.93	77.25	79.41	84.05	88.64	91.17
Senegal	SEN	107.00	110.69	108.05	115.33	117.69	119.91	116.91	120.41	122.96	124.34	127.65
Singapore	SGP	210.04	210.79	213.79	213.56	215.89	214.60	206.13	214.97	216.56	217.88	217.65
Sierra Leone	SLE	66.17	70.45	69.29	70.85	71.77	86.98	86.77	85.53	87.41	86.44	88.20
El Salvador	SLV	131.48	132.22	135.06	139.28	140.58	145.04	144.52	148.06	149.81	152.44	150.14
Serbia	SRB	122.19	132.06	131.91	146.95	154.41	155.37	144.89	160.21	163.83	166.04	165.26
Slovak Republic	SVK	169.39	175.27	177.65	174.98	175.24	192.76	198.89	201.18	202.36	203.01	202.42
Slovenia	SVN	161.92	166.38	169.53	170.63	176.17	185.15	184.25	187.31	192.49	193.11	188.92
Sweden	SWE	209.70	210.89	209.91	210.72	210.64	211.52	211.85	211.94	211.55	210.80	210.21
Syrian Arab Republic	SYR	84.04	86.66	87.28	90.54	92.19	97.58	98.55	102.21	103.55	101.93	104.11
Chad	TCD	66.58	58.98	63.34	78.14	78.87	90.07	89.47	91.75	92.38	90.83	94.89
Togo	TGO	106.63	99.25	94.14	93.26	100.32	102.21	109.18	111.10	111.44	108.73	109.62
Thailand	THA	130.26	135.78	140.97	139.96	138.40	141.63	143.72	146.31	146.95	145.96	150.70
Trinidad and Tobago	TTO	148.25	150.24	153.21	142.43	141.37	137.48	142.12	143.43	142.33	142.44	143.94
Tunisia	TUN	127.72	129.68	131.81	133.43	133.48	135.82	140.85	138.74	140.84	141.15	139.56
Turkey	TUR	139.19	141.65	145.34	142.68	144.61	146.75	162.26	157.29	161.19	161.06	163.75
Tanzania	TZA	67.68	70.15	71.06	74.36	79.51	83.78	85.93	87.71	91.40	89.63	90.78
Uganda	UGA	74.60	78.22	81.58	82.89	89.07	102.16	97.46	99.47	103.45	106.68	107.81
Ukraine	UKR	135.97	141.85	142.54	143.08	144.79	147.72	150.92	152.56	157.06	160.40	162.86
Uruguay	URY	142.80	144.09	144.76	139.82	144.28	147.40	149.69	149.92	151.38	153.57	153.69
United States	USA	180.52	181.76	179.89	177.45	178.61	180.55	180.91	182.77	183.84	181.11	177.48
Venezuela, RB	VEN	139.50	139.72	138.98	138.79	142.13	135.03	135.84	133.37	130.09	127.05	121.47
Vietnam	VNM	85.24	89.43	91.28	94.51	96.26	100.29	101.37	106.16	111.61	114.68	109.99
South Africa	ZAF	140.54	143.80	147.42	147.50	145.73	144.16	146.19	148.47	151.27	151.49	149.46
Zambia	ZMB	118.11	122.09	121.65	125.18	124.09	131.81	127.35	129.85	131.81	126.79	123.53
Zimbabwe	ZWE	107.82	110.56	109.21	109.26	112.49	112.86	109.86	115.11	115.19	118.27	121.49

Table-A-02. Dreher-Hotelling Index of Globalization (First Principal Component Score based Index)												
Country	Code	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Angola	AGO	98.25	98.42	99.89	100.26	101.43	100.97	104.62	106.35	109.23	103.21	100.73
Albania	ALB	88.45	88.45	97.80	105.89	106.68	106.07	108.82	114.93	120.76	125.83	132.15
Argentina	ARG	140.95	141.41	135.64	136.35	132.25	134.13	129.71	129.09	128.60	129.47	126.99
Armenia	ARM	112.79	122.36	122.82	117.25	118.95	122.98	129.41	131.18	129.28	130.87	133.20
Australia	AUS	190.15	191.85	192.19	191.23	192.38	191.48	190.02	191.00	191.53	186.84	189.96
Austria	AUT	207.37	212.27	212.27	211.23	212.30	211.06	212.87	212.96	217.28	215.06	213.81
Azerbaijan	AZE	99.47	107.84	109.89	115.74	119.38	126.66	136.75	136.69	141.42	138.94	137.58
Burundi	BDI	55.52	61.53	60.69	60.04	64.11	66.65	69.24	70.49	77.22	76.02	77.47
Belgium	BEL	218.28	220.71	219.61	219.81	219.66	219.51	218.99	218.49	219.72	219.78	219.81
Benin	BEN	72.29	75.02	75.17	75.16	76.53	83.29	83.32	84.94	98.95	95.00	93.09
Burkina Faso	BFA	81.40	81.52	80.28	81.82	83.99	84.78	86.45	87.86	90.15	90.76	94.03
Bangladesh	BGD	57.24	62.71	64.90	67.15	66.76	70.79	73.52	77.74	80.98	80.97	80.68
Bulgaria	BGR	141.82	146.52	146.99	145.66	151.16	157.54	154.49	163.26	173.19	171.45	167.72

Bahrain	BHR	172.32	173.55	175.91	176.96	177.64	176.18	172.86	174.36	173.85	173.45	174.15
Bahamas, The	BHS	130.21	130.47	132.73	130.67	129.56	131.69	133.16	132.24	133.49	130.56	130.68
Bosnia & Herzegovina	BIH	118.70	125.96	126.68	127.31	129.56	135.15	133.56	146.74	150.12	146.41	145.70
Belize	BLZ	118.73	120.98	122.47	120.98	122.96	121.06	122.98	123.18	120.39	120.05	118.83
Bolivia	BOL	123.17	121.92	119.97	112.97	114.02	117.45	118.61	119.71	118.15	117.47	116.29
Brazil	BRA	119.40	118.08	123.88	124.13	121.46	123.06	123.85	123.44	125.53	123.90	125.42
Barbados	BRB	137.87	138.97	140.35	144.08	145.29	145.14	155.31	157.99	158.74	150.86	152.74
Botswana	BWA	118.74	124.99	123.73	128.15	127.41	125.46	121.99	126.56	127.27	122.54	122.45
Central African Rep	CAF	54.36	57.11	58.01	58.00	57.95	58.65	64.22	72.12	65.22	68.10	74.46
Canada	CAN	209.48	210.75	209.48	208.49	206.70	206.80	204.47	205.10	205.38	204.64	203.27
Switzerland	CHE	214.21	217.31	215.13	214.15	213.23	207.43	208.48	207.15	208.10	204.16	204.72
Chile	CHL	149.01	152.60	157.18	154.61	157.89	162.15	164.47	165.43	168.53	167.24	164.74
China	CHN	105.87	109.05	115.95	119.38	121.19	126.75	132.29	128.56	131.35	128.26	128.38
Cote d'Ivoire	CIV	98.99	101.72	100.67	105.20	104.00	104.49	104.46	106.60	111.40	110.77	111.09
Cameroon	CMR	84.40	84.06	82.82	87.79	87.60	94.06	92.83	88.64	94.17	97.33	96.09
Colombia	COL	114.54	114.83	117.03	117.34	121.73	122.63	121.12	124.79	126.52	123.13	123.08
Costa Rica	CRI	147.92	148.03	145.45	146.74	151.17	142.52	149.74	154.31	157.60	155.54	153.09
Cyprus	CYP	164.14	166.84	169.29	170.35	176.08	194.17	193.21	194.13	214.36	212.98	211.97
Czech Republic	CZE	188.79	191.81	193.95	196.42	196.40	202.60	205.36	205.60	207.21	206.14	205.64
Germany	DEU	189.27	193.15	192.68	194.28	194.16	193.86	194.31	194.37	194.82	192.97	191.61
Denmark	DNK	206.34	212.45	212.59	210.65	211.63	210.62	212.43	211.83	213.08	211.48	208.30
Dominican Republic	DOM	109.28	118.86	124.25	122.50	123.09	127.66	128.36	134.76	137.85	131.57	130.81
Algeria	DZA	102.14	106.48	104.22	109.54	110.35	113.80	117.16	117.42	110.16	111.09	118.74
Ecuador	ECU	121.97	124.26	122.68	123.40	127.25	128.97	129.15	127.78	126.77	119.93	117.00
Egypt, Arab Rep.	EGY	110.56	113.07	114.60	115.27	113.37	116.93	122.98	124.68	127.42	126.70	126.98
Spain	ESP	194.98	198.65	199.87	199.24	200.45	198.53	199.38	199.34	200.15	199.10	196.84
Estonia	EST	179.28	182.81	183.89	184.85	185.87	188.86	188.68	193.08	195.33	195.14	193.78
Ethiopia	ETH	58.81	62.67	64.00	63.43	69.10	74.07	73.29	72.97	72.49	69.71	66.99
Finland	FIN	203.10	206.32	205.92	204.53	202.95	204.03	201.33	201.88	204.02	202.30	198.55
Fiji	FJI	122.46	117.33	123.44	124.97	123.75	125.07	126.03	131.88	129.98	127.91	122.67
France	FRA	190.87	195.85	193.09	193.95	194.64	197.00	195.87	196.83	198.53	197.98	197.74
United Kingdom	GBR	203.93	205.21	203.93	204.03	205.24	202.99	204.44	203.15	202.78	201.78	201.48
Georgia	GEO	111.28	114.04	117.05	118.89	120.49	127.31	126.57	134.14	146.37	148.85	147.23
Ghana	GHA	95.86	106.48	105.88	109.04	113.70	119.32	117.77	112.41	116.94	110.73	119.61
Greece	GRC	172.63	175.06	185.16	184.35	187.47	188.75	187.60	188.83	192.09	192.47	189.94
Guatemala	GTM	113.81	112.36	115.99	117.36	117.63	127.12	131.46	133.42	135.07	134.98	134.14
Guyana	GUY	136.32	145.85	150.19	137.83	136.68	134.58	131.73	142.29	138.72	134.64	131.08
Honduras	HND	120.33	119.99	120.81	127.58	130.56	131.45	134.86	138.72	140.46	141.70	140.27
Croatia	HRV	152.49	152.73	155.23	159.35	164.74	174.54	176.38	177.90	180.71	180.28	180.16
Hungary	HUN	187.08	187.63	190.15	187.55	187.11	196.94	199.83	203.53	204.17	204.11	205.04
Indonesia	IDN	110.37	111.10	111.08	104.05	105.89	113.34	118.69	119.96	118.81	116.77	115.99
India	IND	83.75	86.04	87.92	89.97	92.74	93.16	97.61	102.19	104.31	103.82	103.82
Ireland	IRL	204.91	207.03	208.12	205.82	205.97	204.70	207.79	206.48	205.88	205.37	220.78
Iran, Islamic Rep.	IRN	75.84	80.74	80.77	88.60	90.27	84.59	84.96	88.81	84.24	84.00	87.64
Iceland	ISL	186.94	189.53	190.07	187.79	191.36	185.38	184.28	182.37	182.60	187.00	174.15
Israel	ISR	161.63	164.33	174.78	175.39	175.47	176.31	178.21	177.28	178.94	180.78	179.62
Italy	ITA	185.42	188.88	187.33	187.04	186.81	188.95	187.86	186.51	187.49	186.26	185.45
Jamaica	JAM	143.88	145.88	140.54	138.59	144.18	154.76	144.41	147.34	150.41	148.56	143.71
Jordan	JOR	147.24	148.67	152.37	153.00	155.15	155.11	158.21	159.97	165.20	166.02	163.30
Japan	JPN	131.70	134.94	134.19	133.01	137.49	138.14	139.63	152.22	153.22	147.65	147.79
Kazakhstan	KAZ	114.29	122.44	125.29	126.69	128.49	130.26	134.42	132.55	134.19	133.51	135.92
Kenya	KEN	87.34	88.33	89.31	92.03	92.61	96.24	96.26	96.35	99.87	97.83	101.34
Kyrgyz Republic	KGZ	117.96	124.07	121.44	119.28	113.07	120.81	121.75	133.43	138.93	132.07	130.36
Korea, Rep.	KOR	127.55	130.08	135.01	133.26	133.24	136.71	133.30	135.34	139.12	138.58	137.25
Kuwait	KWT	172.87	169.82	171.05	171.11	171.26	171.13	171.68	173.41	176.35	175.37	177.81
Sri Lanka	LKA	98.25	108.28	110.36	109.77	113.70	110.01	111.02	114.80	115.56	112.73	108.42
Lesotho	LSO	99.58	100.96	97.36	101.00	100.24	100.45	98.35	98.63	98.67	105.07	100.20
Lithuania	LTU	147.70	150.43	155.35	159.28	160.70	163.85	167.70	169.95	172.68	172.28	164.87
Luxembourg	LUX	198.89	199.73	200.99	204.54	205.47	207.59	204.78	203.25	209.79	209.49	209.84

Latvia	LVA	154.81	157.27	161.64	163.80	166.10	171.76	173.55	177.10	177.03	174.77	166.27
Morocco	MAR	105.93	112.72	118.08	121.37	124.76	120.43	129.28	127.40	132.16	133.00	134.89
Moldova	MDA	128.31	134.87	135.17	134.38	142.32	141.98	140.52	145.19	151.21	150.54	150.26
Madagascar	MDG	66.47	70.76	74.48	73.89	76.17	90.27	86.02	89.74	89.93	92.00	92.52
Mexico	MEX	132.59	134.57	131.99	133.41	130.98	131.10	136.76	134.72	134.71	134.40	138.03
Macedonia, FYR	MKD	110.21	123.02	124.98	130.34	130.32	132.17	142.88	142.49	159.54	153.73	151.04
Mali	MLI	70.45	72.39	77.69	85.37	87.23	89.47	87.38	94.12	90.01	91.78	95.81
Malta	MLT	174.16	174.04	171.46	179.58	178.60	191.54	191.48	193.57	194.65	194.27	193.75
Mongolia	MNG	88.81	92.57	92.27	98.25	100.59	101.23	104.53	110.49	109.61	111.02	119.08
Mozambique	MOZ	91.67	96.28	94.37	96.99	94.32	100.89	102.04	103.01	103.96	102.38	105.20
Mauritania	MRT	85.77	90.09	90.92	92.32	92.02	94.24	96.50	96.95	106.01	114.40	110.37
Mauritius	MUS	129.87	129.34	143.53	137.60	140.94	138.93	153.34	163.90	167.63	169.33	161.38
Malawi	MWI	83.10	83.09	88.91	89.70	90.96	92.68	91.12	91.10	93.37	97.32	89.60
Malaysia	MYS	173.82	175.58	179.35	179.31	177.47	179.47	178.11	180.01	180.33	179.44	179.57
Namibia	NAM	126.24	128.40	130.69	133.75	129.52	135.25	130.23	126.23	132.63	132.68	131.50
Niger	NER	57.33	58.87	58.34	59.57	59.62	60.62	61.66	68.04	64.60	66.58	72.01
Nigeria	NGA	99.04	101.68	99.97	100.19	104.63	104.44	109.83	112.99	119.42	118.03	118.95
Nicaragua	NIC	119.81	123.93	122.52	125.07	128.87	127.76	123.23	129.23	128.87	127.35	129.68
Netherlands	NLD	214.97	216.41	215.32	213.86	215.93	214.51	215.00	215.52	217.28	216.97	215.64
Norway	NOR	195.03	195.71	194.80	192.22	196.46	192.37	188.54	191.89	193.56	192.74	194.83
Nepal	NPL	63.24	75.84	75.92	76.06	68.91	68.95	73.19	73.51	73.39	73.49	74.69
New Zealand	NZL	190.32	193.69	192.28	191.77	189.92	190.54	189.89	191.58	190.52	190.80	187.35
Oman	OMN	142.04	144.68	152.90	141.19	140.76	144.01	146.05	146.22	152.05	150.80	154.01
Pakistan	PAK	88.19	94.45	97.98	105.43	101.35	99.88	102.95	104.68	107.96	107.38	107.03
Panama	PAN	151.55	154.18	155.79	151.71	153.33	155.67	155.14	156.83	159.39	161.16	164.09
Peru	PER	114.77	122.08	122.55	122.81	124.83	126.89	129.87	132.93	139.64	141.33	140.49
Philippines	PHL	116.69	119.15	121.87	123.83	121.67	127.89	126.28	125.39	123.19	119.27	119.66
Papua New Guinea	PNG	100.28	95.67	97.85	108.31	106.27	102.72	102.07	104.30	115.96	113.85	113.18
Poland	POL	165.99	167.77	164.98	168.18	173.64	185.43	181.37	186.14	188.39	185.38	187.98
Portugal	PRT	185.78	189.53	191.51	188.99	190.60	205.00	204.38	205.36	206.45	205.66	205.05
Paraguay	PRY	105.07	109.42	116.67	113.67	115.24	119.71	122.10	123.67	124.35	122.97	127.11
Romania	ROM	130.10	132.91	132.61	134.48	136.72	144.50	150.07	149.42	173.26	172.33	171.79
Russian Federation	RUS	133.21	148.21	150.81	154.29	155.63	155.36	155.28	154.95	156.47	150.66	154.23
Rwanda	RWA	57.16	59.87	65.58	67.56	68.85	70.72	71.10	72.47	77.38	81.27	83.38
Senegal	SEN	96.12	100.37	97.17	105.32	107.93	110.16	106.97	110.64	113.22	114.65	117.90
Singapore	SGP	213.22	213.39	215.58	215.53	218.16	217.79	212.32	217.59	218.19	219.34	218.77
Sierra Leone	SLE	61.42	65.80	64.78	66.69	67.57	79.28	78.90	77.31	79.41	78.15	79.98
El Salvador	SLV	127.08	127.71	130.47	134.38	136.03	140.49	139.71	142.91	144.43	147.49	144.76
Serbia	SRB	127.37	137.38	136.28	145.82	150.92	151.70	145.77	155.81	159.68	162.17	161.43
Slovak Republic	SVK	168.82	174.05	175.86	172.47	172.31	190.54	197.78	199.66	200.70	201.27	200.57
Slovenia	SVN	161.79	165.73	168.65	168.81	174.68	184.25	183.02	185.61	190.44	190.71	186.40
Sweden	SWE	205.87	206.82	205.79	206.77	206.71	207.36	207.53	207.55	207.04	206.31	205.82
Syrian Arab Republic	SYR	77.50	80.23	81.12	85.05	86.75	92.45	93.39	97.28	98.71	96.78	99.41
Chad	TCO	56.59	53.19	57.02	72.86	73.97	81.71	80.92	82.79	83.58	81.79	85.81
Togo	TGO	98.45	90.48	88.71	87.89	91.63	92.36	99.80	101.22	101.56	99.00	99.80
Thailand	THA	123.41	128.04	132.73	131.72	129.72	134.04	135.86	138.46	139.05	138.04	143.20
Trinidad and Tobago	TTO	148.96	150.77	154.21	142.41	141.08	137.48	142.01	143.14	141.96	141.85	143.10
Tunisia	TUN	118.23	120.06	121.76	123.83	123.77	126.33	131.72	129.12	131.01	131.39	129.91
Turkey	TUR	131.57	133.83	136.95	134.51	136.56	139.26	156.64	150.52	155.65	154.74	157.34
Tanzania	TZA	60.21	62.46	63.35	67.33	73.04	77.13	79.52	81.74	85.21	83.61	84.29
Uganda	UGA	69.67	73.73	77.05	78.51	84.74	94.59	89.27	90.75	94.79	98.14	99.08
Ukraine	UKR	131.54	136.79	137.06	137.81	139.07	142.05	145.25	146.56	150.73	154.15	156.23
Uruguay	URY	137.15	138.21	138.19	133.00	136.28	139.23	141.95	142.04	143.44	146.17	146.64
United States	USA	177.14	178.38	176.47	173.79	175.04	177.16	177.43	179.13	180.19	177.41	173.72
Venezuela, RB	VEN	131.84	132.11	131.31	130.63	133.97	130.07	131.28	128.40	125.40	122.66	116.79
Vietnam	VNM	79.53	83.61	85.75	89.27	90.86	95.40	96.00	100.48	105.69	108.70	103.94
South Africa	ZAF	134.38	137.42	140.52	140.32	137.94	135.87	137.73	139.96	142.54	142.63	141.03
Zambia	ZMB	110.09	113.25	112.66	116.90	115.69	122.95	118.41	120.64	122.75	117.30	114.71
Zimbabwe	ZWE	99.77	102.15	100.66	101.24	104.49	105.04	101.12	106.3	106.24	109.27	112.63

Table-A-03. Dreher-Chevyshev Index of Globalization

Country	Code	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Angola	AGO	85.81	84.73	85.85	84.69	86.15	84.07	86.98	87.89	90.77	90.14	88.00
Albania	ALB	79.35	79.18	82.93	85.41	88.83	90.60	93.58	96.30	100.20	106.35	112.11
Argentina	ARG	118.01	119.53	116.66	122.61	122.12	122.38	119.47	118.89	118.68	116.61	117.09
Armenia	ARM	67.62	71.17	70.82	72.27	76.91	83.52	84.20	87.34	89.29	88.12	92.48
Australia	AUS	129.78	132.80	133.85	133.35	133.92	133.40	133.35	135.66	137.22	135.28	136.99
Austria	AUT	146.44	149.97	150.61	150.60	150.49	151.36	152.97	154.08	155.51	154.84	153.81
Azerbaijan	AZE	66.93	77.99	80.29	84.51	89.49	94.77	97.74	98.12	99.31	98.60	97.31
Burundi	BDI	44.46	46.92	45.63	44.90	49.56	49.82	50.49	49.70	64.52	65.77	67.84
Belgium	BEL	153.06	154.64	154.43	154.14	153.98	154.67	154.91	156.62	158.27	158.53	157.85
Benin	BEN	77.85	79.78	81.84	80.45	81.47	83.97	83.39	84.95	95.91	91.85	92.74
Burkina Faso	BFA	74.42	74.95	74.29	74.31	76.22	76.63	79.04	81.87	85.24	85.93	88.85
Bangladesh	BGD	70.21	74.53	75.91	76.07	76.90	78.07	81.23	83.34	86.32	86.38	86.19
Bulgaria	BGR	120.68	124.03	124.26	122.89	125.52	126.48	125.03	132.34	135.21	134.66	129.95
Bahrain	BHR	114.68	113.42	114.00	114.07	116.07	118.45	118.82	118.98	119.77	119.95	120.14
Bahamas, The	BHS	103.50	102.59	101.20	97.39	97.18	98.84	100.63	101.24	102.75	98.75	100.26
Bosnia & Herzegovina	BIH	78.56	92.27	95.61	95.25	97.37	99.52	100.55	106.52	111.80	108.48	106.88
Belize	BLZ	95.05	97.89	101.68	99.01	100.83	101.12	102.29	103.37	104.63	105.27	105.87
Bolivia	BOL	99.21	100.57	101.21	103.60	104.31	108.69	110.86	111.86	112.57	111.43	109.96
Brazil	BRA	107.55	106.93	109.51	109.46	109.76	111.13	110.75	110.25	111.99	110.24	111.59
Barbados	BRB	97.80	98.57	100.09	101.31	102.27	102.79	106.57	107.83	109.23	102.66	107.73
Botswana	BWA	85.60	89.81	88.52	92.07	93.74	91.74	92.69	105.07	107.13	98.50	100.97
Central African Rep	CAF	58.71	61.44	60.38	59.45	59.56	58.78	72.68	75.52	74.18	76.19	78.59
Canada	CAN	144.32	144.94	144.37	143.08	141.81	141.77	142.27	142.29	142.54	142.04	140.53
Switzerland	CHE	150.59	152.67	152.61	151.40	151.53	151.40	152.80	153.34	154.62	153.89	153.72
Chile	CHL	117.62	120.62	122.86	122.95	125.32	129.26	130.06	130.24	132.94	132.54	131.68
China	CHN	90.35	91.75	93.15	92.05	94.43	96.94	101.25	102.92	103.56	101.65	101.30
Cote d'Ivoire	CIV	92.45	91.98	91.97	94.80	95.34	95.75	94.38	96.06	97.19	96.32	96.01
Cameroon	CMR	90.76	89.26	88.16	88.91	88.62	88.70	90.50	87.00	90.76	92.91	90.96
Colombia	COL	85.41	86.08	89.11	89.44	91.76	91.68	92.48	105.81	106.47	106.19	106.88
Costa Rica	CRI	103.40	102.18	99.66	97.73	102.72	98.04	104.62	106.05	108.55	104.60	105.13
Cyprus	CYP	112.38	115.51	118.38	118.55	119.07	123.19	124.28	127.11	142.01	142.25	141.33
Czech Republic	CZE	126.86	130.76	135.31	136.34	137.31	138.94	138.98	140.62	143.86	142.65	141.98
Germany	DEU	123.77	128.45	127.97	128.98	129.30	129.50	131.23	133.54	136.22	134.37	132.52
Denmark	DNK	143.41	148.25	148.55	147.63	145.83	146.56	150.21	150.50	152.05	151.44	149.24
Dominican Republic	DOM	85.05	101.81	103.11	90.64	95.81	110.04	106.28	110.97	112.28	97.25	96.01
Algeria	DZA	102.67	106.04	104.08	106.22	107.01	109.50	111.25	110.43	95.82	106.53	110.73
Ecuador	ECU	98.74	100.81	96.66	94.63	107.34	110.82	112.02	110.80	110.61	105.72	104.26
Egypt, Arab Rep.	EGY	103.82	103.38	104.17	104.80	105.31	107.79	112.99	113.99	114.04	113.15	113.75
Spain	ESP	131.58	135.18	137.18	136.77	136.40	137.03	139.59	142.67	144.91	143.77	142.53
Estonia	EST	114.30	119.01	121.63	123.33	125.98	130.34	130.80	132.45	133.83	134.77	133.35
Ethiopia	ETH	62.72	63.96	65.09	65.88	80.99	85.97	87.29	88.33	87.31	85.41	84.74
Finland	FIN	138.37	141.72	141.69	139.55	140.10	142.78	140.13	142.73	144.66	142.64	139.09
Fiji	FJI	107.64	104.87	112.04	110.35	112.36	113.12	110.41	115.71	113.16	110.56	106.97
France	FRA	128.94	133.25	132.61	131.65	131.72	133.89	135.52	137.88	139.19	138.15	136.83
United Kingdom	GBR	137.69	139.09	138.93	137.98	138.31	137.38	138.52	139.94	139.41	139.15	138.24
Georgia	GEO	63.03	69.72	71.75	73.53	77.19	78.57	79.77	86.18	93.82	98.03	98.20
Ghana	GHA	108.49	118.07	117.74	117.66	117.18	117.74	115.00	109.41	110.34	108.72	115.89
Greece	GRC	123.66	126.97	126.72	126.34	129.19	129.96	130.23	133.87	137.47	137.60	134.58
Guatemala	GTM	80.97	83.61	86.76	87.25	87.08	103.30	104.09	107.18	108.82	108.02	107.43
Guyana	GUY	104.28	103.79	105.23	105.08	104.52	103.86	102.20	102.29	96.77	97.76	97.13
Honduras	HND	96.15	100.33	101.00	101.84	103.93	106.10	106.92	108.22	108.89	111.19	108.80
Croatia	HRV	109.32	112.22	117.54	119.61	124.13	127.02	128.46	132.18	135.74	135.50	134.68
Hungary	HUN	139.31	140.32	140.74	139.40	140.03	142.01	143.04	145.86	147.11	146.92	147.89
Indonesia	IDN	105.47	105.44	101.63	95.91	95.27	100.66	105.16	105.01	106.27	104.55	104.93
India	IND	89.19	92.01	92.49	92.62	94.02	94.57	96.91	100.32	103.09	104.52	104.34

Ireland	IRL	151.84	153.18	154.25	153.86	153.14	153.46	153.52	152.97	154.80	153.91	155.80
Iran, Islamic Rep.	IRN	57.78	59.26	60.04	74.43	77.37	76.06	77.31	79.63	78.73	78.84	79.92
Iceland	ISL	116.57	120.04	123.06	120.64	122.07	111.70	114.45	117.27	118.87	133.60	135.41
Israel	ISR	112.44	115.00	112.08	112.29	113.86	115.59	117.03	119.44	120.41	131.73	131.58
Italy	ITA	132.00	134.41	133.69	134.35	133.85	133.19	134.50	137.15	139.80	139.27	137.35
Jamaica	JAM	99.28	100.74	102.87	102.60	103.74	118.26	119.50	121.57	124.08	124.06	121.71
Jordan	JOR	124.02	131.15	131.58	129.71	129.79	132.22	134.63	133.53	135.42	131.67	129.16
Japan	JPN	93.71	94.52	95.14	97.06	97.35	98.30	98.65	101.87	104.08	101.10	100.33
Kazakhstan	KAZ	80.20	90.44	93.33	95.07	96.86	98.13	100.91	102.33	117.87	118.32	118.11
Kenya	KEN	89.21	92.52	93.75	93.22	93.43	94.12	94.09	93.10	97.19	94.91	97.13
Kyrgyz Republic	KGZ	87.20	92.64	88.11	88.98	92.20	96.54	97.13	98.40	100.15	105.01	107.43
Korea, Rep.	KOR	105.98	108.64	110.09	109.23	110.52	111.29	111.01	112.33	117.48	119.33	119.99
Kuwait	KWT	101.72	97.37	96.65	94.96	94.92	97.35	99.61	103.19	109.69	107.20	108.29
Sri Lanka	LKA	79.09	93.49	92.57	91.25	91.62	94.22	93.86	98.38	99.44	99.18	93.23
Lesotho	LSO	79.97	78.96	76.75	78.51	77.31	77.08	77.01	76.27	76.43	91.49	77.95
Lithuania	LTU	87.88	91.09	93.11	93.69	96.28	100.29	102.46	105.84	109.82	113.73	105.15
Luxembourg	LUX	132.61	132.83	133.59	133.04	133.49	134.28	133.99	135.21	150.62	150.36	150.26
Latvia	LVA	91.38	93.30	94.32	94.73	98.22	105.14	107.19	112.83	113.79	112.11	101.57
Morocco	MAR	87.36	103.22	107.93	108.55	109.27	108.48	112.38	113.29	116.66	116.24	116.38
Moldova	MDA	80.63	83.76	80.41	79.14	94.27	92.97	93.70	98.75	102.96	100.50	99.79
Madagascar	MDG	58.36	58.92	59.41	58.26	57.21	78.18	77.19	83.96	88.91	90.24	91.78
Mexico	MEX	102.31	102.66	102.04	100.96	101.13	100.94	103.23	103.88	103.86	103.29	105.40
Macedonia, FYR	MKD	60.28	63.90	66.19	70.95	73.85	72.70	77.74	79.60	101.53	97.17	96.06
Mali	MLI	88.38	87.15	94.05	97.13	94.86	94.75	93.97	98.32	97.23	95.79	99.68
Malta	MLT	111.56	112.46	112.34	112.02	113.65	117.05	117.22	120.75	122.47	121.90	123.58
Mongolia	MNG	64.35	69.76	69.77	84.44	88.63	88.74	93.83	101.74	100.80	101.37	106.72
Mozambique	MOZ	85.85	90.73	95.54	99.22	94.20	96.82	99.25	100.45	101.03	99.62	94.67
Mauritania	MRT	75.95	79.93	81.26	81.57	81.81	85.10	87.69	86.01	90.53	105.79	103.43
Mauritius	MUS	81.34	80.24	81.17	80.08	93.42	92.38	98.15	105.31	110.14	112.46	98.50
Malawi	MWI	68.74	68.61	71.39	66.66	72.47	75.14	76.17	75.90	76.20	88.67	79.43
Malaysia	MYS	127.45	128.32	129.85	132.46	132.69	134.54	134.44	136.65	137.88	137.58	138.28
Namibia	NAM	107.30	108.80	109.32	111.73	107.09	114.47	116.00	115.24	119.87	119.00	117.22
Niger	NER	72.89	75.50	73.45	74.67	74.69	76.61	77.43	79.22	79.40	79.45	85.77
Nigeria	NGA	115.90	117.84	116.31	113.27	116.71	112.04	111.82	114.08	119.59	119.79	121.64
Nicaragua	NIC	85.38	88.70	87.70	87.96	88.73	89.24	88.01	90.28	91.39	91.15	91.02
Netherlands	NLD	153.35	155.20	154.87	152.63	153.66	152.98	153.11	155.19	157.00	155.72	154.59
Norway	NOR	134.49	137.42	138.00	136.58	137.71	139.04	139.79	142.04	144.11	144.13	144.26
Nepal	NPL	66.04	69.30	71.66	72.26	71.78	73.29	73.28	73.94	73.45	73.54	73.48
New Zealand	NZL	130.46	135.10	134.44	134.07	131.75	131.93	131.43	132.88	134.02	134.39	132.61
Oman	OMN	93.16	94.34	94.81	88.52	89.37	91.89	94.93	97.72	102.84	101.59	104.37
Pakistan	PAK	94.94	96.43	97.21	98.63	97.85	96.81	100.16	102.53	105.98	105.17	102.38
Panama	PAN	113.60	114.68	114.21	110.40	112.04	113.25	113.58	115.31	117.73	119.04	118.79
Peru	PER	87.79	102.40	103.11	102.16	105.24	109.88	114.08	117.26	119.07	118.34	117.27
Philippines	PHL	108.62	113.24	113.13	112.27	111.55	114.40	114.67	115.09	114.09	110.53	110.08
Papua New Guinea	PNG	88.31	86.83	88.18	87.72	89.11	87.31	86.61	90.05	91.14	89.20	87.00
Poland	POL	116.58	120.25	120.39	120.44	124.83	132.01	131.04	134.94	136.40	132.04	135.32
Portugal	PRT	134.62	140.22	142.30	140.71	141.18	141.32	140.80	144.07	146.75	146.52	145.44
Paraguay	PRY	78.87	81.05	94.71	95.53	96.16	100.30	100.57	103.11	103.38	102.07	105.25
Romania	ROM	106.24	108.87	111.34	112.56	114.15	121.03	120.68	122.84	126.50	124.12	122.02
Russian Federation	RUS	104.80	109.48	110.56	112.43	116.10	114.65	116.61	118.09	120.29	115.19	118.75
Rwanda	RWA	48.66	51.16	53.88	51.46	52.00	52.61	65.53	68.81	72.29	77.70	80.03
Senegal	SEN	102.75	103.65	103.23	105.35	106.02	107.16	105.73	107.07	108.83	110.03	112.71
Singapore	SGP	133.98	136.03	139.63	139.36	139.78	136.99	124.48	138.92	142.54	143.56	144.35
Sierra Leone	SLE	58.15	60.66	59.16	59.72	60.09	80.71	79.90	79.87	82.38	81.49	81.29
El Salvador	SLV	95.98	97.48	99.67	104.46	104.95	107.86	108.38	111.47	113.40	112.34	112.18
Serbia	SRB	68.66	74.57	76.62	99.80	110.46	111.31	94.07	117.47	118.44	120.13	118.67
Slovak Republic	SVK	108.41	114.69	117.89	118.41	119.95	129.59	130.24	133.26	135.07	136.04	135.69
Slovenia	SVN	107.41	112.52	114.94	119.23	121.51	125.02	125.78	130.38	135.62	137.23	134.03
Sweden	SWE	147.85	150.06	149.71	149.20	148.90	150.77	151.78	152.30	152.56	152.01	151.20

Syrian Arab Republic	SYR	80.08	82.12	81.10	81.27	81.99	84.35	85.28	86.42	86.45	86.82	86.10
Chad	TCD	75.58	60.41	65.98	73.72	71.90	87.62	87.61	89.70	89.45	89.14	92.15
Togo	TGO	96.87	96.57	85.41	85.17	97.03	100.94	105.54	107.25	107.32	104.40	104.81
Thailand	THA	105.85	111.79	116.70	116.28	117.29	116.21	118.67	119.75	120.62	119.47	120.81
Trinidad and Tobago	TTO	101.77	104.70	103.64	102.91	102.78	98.26	102.78	104.61	103.26	103.96	106.26
Tunisia	TUN	114.52	116.69	118.83	118.18	118.36	119.10	121.63	122.23	124.82	125.19	123.00
Turkey	TUR	107.94	110.35	115.64	112.22	112.86	112.37	113.70	114.78	114.25	115.46	118.52
Tanzania	TZA	65.41	67.67	68.39	68.26	69.54	73.15	73.59	72.83	77.02	74.35	77.65
Uganda	UGA	61.67	62.38	65.53	65.04	69.97	86.95	85.81	89.13	91.42	92.79	93.67
Ukraine	UKR	102.38	108.39	109.49	109.10	111.72	113.01	115.62	117.90	121.65	123.88	127.50
Uruguay	URY	107.10	108.78	111.79	108.87	118.38	121.42	120.66	121.71	123.01	122.03	120.66
United States	USA	118.95	119.97	118.40	117.45	118.04	119.48	120.56	122.93	123.84	121.82	119.47
Venezuela, RB	VEN	110.97	110.61	110.25	113.29	115.62	103.15	102.03	102.39	98.23	93.73	89.94
Vietnam	VNM	77.37	81.33	81.25	82.56	83.71	84.37	86.41	90.12	95.01	97.87	93.56
South Africa	ZAF	110.81	113.42	116.96	118.14	118.28	118.38	120.45	122.51	125.94	126.13	122.22
Zambia	ZMB	104.30	108.96	108.00	108.47	107.54	115.33	112.79	114.60	116.69	112.94	106.39
Zimbabwe	ZWE	98.96	101.64	101.11	99.62	101.32	102.01	102.54	106.54	106.95	109.35	111.61

Table-A-04. Dreher-Shannon or Entropy-maximizing Index of Globalization												
Country	Code	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Angola	AGO	102.72	102.71	104.26	104.38	105.91	104.99	108.67	110.49	113.73	108.22	105.74
Albania	ALB	93.68	93.70	102.62	110.05	111.61	111.43	114.30	120.17	125.93	131.25	137.91
Argentina	ARG	149.01	149.72	144.38	145.87	142.28	143.85	139.50	138.91	138.60	138.68	136.56
Armenia	ARM	110.59	119.38	119.91	115.41	117.95	122.35	128.20	130.54	129.62	130.81	133.60
Australia	AUS	192.73	194.98	195.48	194.49	195.59	194.64	193.35	194.65	195.44	191.04	194.09
Austria	AUT	210.86	215.69	215.80	214.82	215.74	214.75	216.56	216.81	220.78	218.77	217.52
Azerbaijan	AZE	99.99	109.13	111.54	117.54	121.72	128.71	138.08	138.18	142.85	140.61	139.22
Burundi	BDI	58.06	63.63	62.85	62.12	66.54	68.88	71.31	72.53	82.48	81.81	83.54
Belgium	BEL	221.15	223.54	222.57	222.66	222.51	222.43	222.01	222.06	223.48	223.59	223.48
Benin	BEN	80.23	83.02	83.73	83.33	84.86	91.53	91.54	93.37	106.64	102.74	101.46
Burkina Faso	BFA	87.70	87.84	86.98	88.39	90.67	91.50	93.53	95.39	97.85	98.55	101.94
Bangladesh	BGD	67.13	72.66	74.87	76.84	76.58	80.39	83.25	87.21	90.66	90.72	90.40
Bulgaria	BGR	149.35	153.95	154.38	152.99	158.25	163.91	160.83	169.70	178.85	177.34	173.07
Bahrain	BHR	169.11	169.92	172.22	173.19	174.26	173.55	170.78	172.14	172.05	171.93	172.65
Bahamas, The	BHS	130.88	131.17	132.93	130.40	129.56	131.68	133.31	132.65	134.11	131.07	131.56
Bosnia & Herzegovina	BIH	118.02	128.21	129.87	130.35	132.75	138.08	137.02	149.80	153.73	150.13	149.34
Belize	BLZ	119.15	121.66	123.82	121.86	123.89	122.52	124.48	124.96	122.76	122.52	121.94
Bolivia	BOL	128.96	128.28	126.64	120.60	121.66	125.44	126.77	127.86	126.57	125.85	124.57
Brazil	BRA	128.73	127.46	133.04	133.22	130.94	132.84	133.55	133.10	135.32	133.61	135.19
Barbados	BRB	136.08	137.14	138.75	142.16	143.31	143.27	152.78	155.32	156.24	148.09	151.14
Botswana	BWA	118.56	124.69	123.44	127.81	127.60	125.64	122.66	130.27	131.40	125.34	126.32
Central African Rep	CAF	59.79	62.59	63.23	62.98	63.07	63.46	72.13	79.73	73.58	76.57	82.64
Canada	CAN	212.17	213.38	212.24	211.13	209.46	209.49	207.53	208.06	208.30	207.61	206.19
Switzerland	CHE	216.77	219.80	217.92	216.88	216.12	210.97	212.09	211.03	212.08	208.49	209.02
Chile	CHL	155.21	158.81	163.26	160.91	164.09	168.64	170.88	171.75	174.94	173.91	171.66
China	CHN	113.87	116.90	123.31	126.17	128.16	133.52	139.00	136.18	138.77	135.81	135.94
Cote d'Ivoire	CIV	104.54	106.52	105.88	110.03	109.09	109.58	109.47	111.66	116.02	115.50	115.74
Cameroon	CMR	93.07	92.57	91.45	96.05	95.93	101.68	100.88	97.02	102.27	105.30	104.24
Colombia	COL	118.59	118.93	121.33	121.61	125.80	126.52	125.32	132.08	133.77	130.66	130.87
Costa Rica	CRI	149.08	148.89	146.37	147.05	151.85	143.48	150.73	154.96	158.38	156.05	154.05
Cyprus	CYP	163.33	166.13	168.79	169.66	174.84	191.49	190.92	192.28	214.36	213.25	212.29
Czech Republic	CZE	190.60	194.02	196.90	199.23	199.39	205.09	207.52	208.00	209.96	208.76	208.21
Germany	DEU	191.17	195.33	194.87	196.50	196.47	196.22	196.89	197.35	198.33	196.34	194.90
Denmark	DNK	209.31	215.31	215.49	213.61	214.12	213.44	215.52	215.00	216.40	214.84	211.74
Dominican Republic	DOM	111.86	124.39	129.43	124.49	125.72	133.52	133.64	140.21	143.21	133.85	133.09
Algeria	DZA	111.60	115.97	113.92	118.94	119.74	123.05	126.14	126.26	116.15	120.18	127.55
Ecuador	ECU	126.48	128.69	126.69	126.84	133.75	136.10	136.56	135.36	134.57	128.07	125.13
Egypt, Arab Rep.	EGY	120.46	122.52	123.98	124.54	122.93	126.33	132.46	134.23	136.67	135.89	136.30

Spain	ESP	197.88	201.68	203.01	202.32	203.22	201.60	202.82	203.33	204.49	203.41	201.31
Estonia	EST	177.46	181.43	182.99	184.11	185.51	189.19	189.21	193.41	195.70	195.96	194.61
Ethiopia	ETH	65.93	69.55	70.91	70.59	79.49	84.89	84.60	84.70	84.17	81.48	78.99
Finland	FIN	205.80	209.06	208.77	207.04	205.87	207.51	204.28	205.25	207.53	205.57	201.85
Fiji	FJI	127.87	123.17	129.53	130.63	130.07	131.11	131.56	137.56	135.62	133.37	128.48
France	FRA	194.05	199.01	196.48	197.09	197.66	200.12	199.35	200.60	202.29	201.65	201.25
United Kingdom	GBR	206.77	208.12	207.00	206.97	208.03	205.89	207.25	206.35	205.96	205.05	204.68
Georgia	GEO	108.71	112.44	115.47	117.37	119.63	125.69	125.31	133.29	145.50	148.51	147.21
Ghana	GHA	106.58	117.33	116.86	119.57	123.60	128.63	126.78	121.21	125.35	120.08	128.51
Greece	GRC	176.35	178.97	188.16	187.48	190.59	191.84	190.79	192.55	196.07	196.48	193.72
Guatemala	GTM	116.86	115.98	119.52	120.75	120.90	133.40	137.54	139.88	141.68	141.53	140.69
Guyana	GUY	137.30	145.92	149.98	138.84	137.81	135.87	133.27	142.78	138.88	135.14	131.97
Honduras	HND	125.32	125.54	126.51	132.69	135.79	136.89	139.91	143.43	145.22	146.63	145.00
Croatia	HRV	154.08	154.80	158.13	162.21	167.78	177.25	179.13	181.15	184.41	184.08	183.93
Hungary	HUN	191.86	192.53	194.86	192.38	192.23	201.15	203.66	207.32	208.08	208.09	209.07
Indonesia	IDN	119.80	120.53	120.03	113.16	114.84	122.12	127.49	128.77	128.06	126.12	125.57
India	IND	94.85	97.45	99.19	101.03	103.63	104.08	108.46	113.00	115.35	115.07	115.01
Ireland	IRL	207.98	210.07	211.24	209.13	209.12	208.10	210.81	209.50	209.47	208.77	223.11
Iran, Islamic Rep.	IRN	79.01	83.52	83.72	94.15	96.23	90.81	91.34	95.37	91.29	91.16	94.56
Iceland	ISL	186.18	189.02	189.89	187.57	190.65	181.95	181.41	180.32	180.85	188.65	177.51
Israel	ISR	161.98	164.74	173.93	174.52	174.90	175.96	177.91	177.53	179.13	184.16	183.29
Italy	ITA	189.94	193.32	191.90	191.69	191.33	193.09	192.42	191.71	193.08	191.93	190.99
Jamaica	JAM	144.21	146.26	141.84	139.92	144.96	158.21	149.10	152.04	154.99	153.47	148.88
Jordan	JOR	153.19	155.85	159.23	159.47	161.50	161.85	165.04	166.41	171.27	171.45	168.75
Japan	JPN	136.86	139.81	139.24	138.71	142.73	143.37	144.56	156.25	157.41	152.28	152.43
Kazakhstan	KAZ	114.16	123.09	126.21	127.82	129.72	131.32	135.39	134.12	139.77	139.35	141.52
Kenya	KEN	96.68	98.24	99.42	101.73	102.35	105.53	105.54	105.63	109.16	107.18	110.51
Kyrgyz Republic	KGZ	120.51	127.07	124.13	122.41	117.44	124.81	125.97	136.65	141.83	136.30	135.16
Korea, Rep.	KOR	134.36	137.24	141.97	140.33	140.47	143.44	140.57	142.67	146.90	146.71	145.66
Kuwait	KWT	170.07	166.94	167.91	167.55	167.77	168.20	169.16	171.18	174.88	173.64	175.96
Sri Lanka	LKA	101.76	114.47	116.19	115.43	118.91	116.33	117.29	121.51	122.41	119.89	115.30
Lesotho	LSO	100.92	101.99	98.88	102.51	101.78	101.91	100.45	100.32	100.38	110.07	102.09
Lithuania	LTU	144.88	147.91	152.65	156.16	157.96	161.67	165.29	167.83	171.05	172.00	164.28
Luxembourg	LUX	196.84	197.60	198.92	201.84	202.80	204.85	202.31	201.30	211.28	210.94	211.22
Latvia	LVA	151.42	153.96	157.90	159.97	162.62	168.94	170.87	175.18	175.47	173.31	164.45
Morocco	MAR	110.84	120.79	126.66	129.74	132.90	129.25	137.38	136.00	140.60	141.16	142.89
Moldova	MDA	125.86	132.04	131.77	130.94	141.81	141.39	140.43	145.64	151.80	150.81	150.41
Madagascar	MDG	70.67	74.64	78.01	77.14	79.11	96.31	92.47	97.07	98.17	100.18	100.86
Mexico	MEX	137.11	138.85	136.59	137.62	135.68	135.58	140.85	139.15	139.37	139.01	142.48
Macedonia, FYR	MKD	106.01	117.64	120.00	125.50	126.02	127.42	137.71	137.66	157.63	151.98	149.58
Mali	MLI	80.99	82.40	88.18	95.35	97.02	98.99	96.99	103.67	100.00	101.15	105.24
Malta	MLT	171.03	171.10	168.80	175.76	175.27	187.44	187.40	190.03	191.45	191.05	191.10
Mongolia	MNG	90.44	94.46	94.37	103.52	106.58	107.11	111.06	117.86	117.08	118.42	126.49
Mozambique	MOZ	97.70	102.57	101.94	104.69	101.74	108.20	109.78	110.64	111.82	110.35	112.15
Mauritania	MRT	89.49	93.86	95.04	96.26	96.17	98.68	101.10	101.38	109.80	121.26	117.14
Mauritius	MUS	127.80	127.18	139.99	134.51	141.33	139.32	152.84	163.37	167.39	169.09	158.55
Malawi	MWI	85.66	85.78	91.45	91.46	93.58	95.69	94.52	94.63	96.88	102.64	94.79
Malaysia	MYS	176.90	178.56	182.33	183.04	181.55	183.67	182.48	184.58	185.11	184.37	184.63
Namibia	NAM	129.83	131.84	133.98	137.09	132.86	139.56	135.50	131.99	138.27	138.08	136.67
Niger	NER	67.11	68.97	68.04	69.46	69.57	71.14	72.18	78.24	75.22	76.84	82.59
Nigeria	NGA	111.82	114.69	113.23	112.71	117.21	116.27	120.93	124.04	130.55	129.31	130.33
Nicaragua	NIC	122.15	126.31	125.05	127.27	130.60	129.59	125.44	131.12	131.15	129.77	131.90
Netherlands	NLD	218.34	219.90	218.93	217.08	219.11	217.61	217.98	218.89	220.92	220.33	218.93
Norway	NOR	197.77	198.78	198.16	195.62	199.47	195.96	192.73	196.07	197.92	197.29	199.25
Nepal	NPL	70.35	82.01	82.58	82.92	76.65	77.20	80.94	81.41	81.28	81.42	82.52
New Zealand	NZL	191.60	195.54	194.25	193.67	191.51	191.94	191.33	193.08	192.49	192.80	189.67
Oman	OMN	140.13	142.67	149.87	138.62	138.45	141.66	144.06	144.61	150.66	149.42	152.75
Pakistan	PAK	98.91	104.69	108.03	114.76	111.13	109.81	113.12	114.96	118.37	117.73	116.98
Panama	PAN	153.70	156.16	157.56	153.37	155.03	157.26	156.85	158.80	161.62	163.48	165.99

Peru	PER	119.33	129.51	130.08	129.93	132.15	134.86	138.24	141.48	147.74	149.08	148.18
Philippines	PHL	124.99	128.29	130.77	132.22	130.20	136.45	135.14	134.46	132.43	128.52	128.85
Papua New Guinea	PNG	103.63	99.54	101.78	110.85	109.56	106.07	105.49	108.23	118.80	116.72	115.73
Poland	POL	170.40	172.56	170.20	173.03	178.52	189.85	186.16	190.92	193.20	189.97	192.73
Portugal	PRT	189.37	193.78	195.90	193.42	194.91	207.72	206.87	208.32	209.95	209.21	208.52
Paraguay	PRY	107.87	112.05	122.32	119.98	121.49	126.30	128.46	130.23	130.95	129.47	133.69
Romania	ROM	137.20	140.07	140.22	142.12	144.31	152.17	156.98	156.71	178.61	177.40	176.58
Russian Federation	RUS	138.51	152.82	155.44	158.78	160.49	160.10	160.36	160.31	162.18	156.39	160.12
Rwanda	RWA	60.32	63.10	68.67	69.85	71.11	72.89	76.90	79.01	83.67	88.22	90.72
Senegal	SEN	106.32	110.07	107.38	114.74	117.12	119.35	116.33	119.85	122.41	123.80	127.10
Singapore	SGP	210.69	211.39	214.34	214.12	216.48	215.26	207.01	215.58	217.10	218.41	218.16
Sierra Leone	SLE	65.91	70.21	69.05	70.64	71.56	86.53	86.30	85.04	86.94	85.95	87.71
El Salvador	SLV	131.39	132.13	134.96	139.16	140.49	144.96	144.41	147.94	149.67	152.34	150.00
Serbia	SRB	122.82	132.71	132.48	147.13	154.42	155.37	145.22	160.16	163.80	166.04	165.25
Slovak Republic	SVK	169.68	175.53	177.86	175.13	175.35	192.97	199.19	201.45	202.62	203.27	202.66
Slovenia	SVN	162.21	166.63	169.77	170.80	176.38	185.42	184.49	187.52	192.68	193.27	189.07
Sweden	SWE	209.81	210.98	210.00	210.82	210.74	211.61	211.92	212.00	211.61	210.86	210.28
Syrian Arab Republic	SYR	83.66	86.30	86.94	90.25	91.91	97.33	98.30	102.00	103.34	101.69	103.91
Chad	TCO	65.91	58.62	62.95	77.85	78.62	89.57	88.95	91.20	91.84	90.28	94.33
Togo	TGO	106.17	98.72	93.87	92.99	99.80	101.60	108.63	110.52	110.85	108.15	109.04
Thailand	THA	129.96	135.42	140.58	139.57	137.97	141.30	143.37	145.96	146.60	145.60	150.39
Trinidad and Tobago	TTO	148.57	150.55	153.57	142.66	141.58	137.71	142.35	143.65	142.55	142.64	144.12
Tunisia	TUN	127.19	129.15	131.24	132.91	132.94	135.31	140.38	138.22	140.31	140.63	139.04
Turkey	TUR	138.86	141.31	144.96	142.31	144.26	146.44	162.15	157.08	161.08	160.89	163.57
Tanzania	TZA	67.21	69.67	70.58	73.94	79.14	83.41	85.59	87.40	91.08	89.32	90.44
Uganda	UGA	74.35	78.02	81.38	82.70	88.90	101.75	97.00	98.97	102.96	106.20	107.32
Ukraine	UKR	135.87	141.71	142.37	142.93	144.60	147.54	150.74	152.36	156.85	160.20	162.64
Uruguay	URY	142.63	143.90	144.52	139.55	143.92	147.04	149.36	149.58	151.04	153.28	153.43
United States	USA	180.62	181.87	179.98	177.52	178.70	180.65	181.00	182.85	183.92	181.18	177.54
Venezuela, RB	VEN	139.16	139.39	138.64	138.40	141.75	134.90	135.73	133.23	129.97	126.94	121.33
Vietnam	VNM	84.94	89.13	91.00	94.25	95.99	100.08	101.12	105.90	111.34	114.40	109.71
South Africa	ZAF	140.32	143.57	147.15	147.22	145.40	143.78	145.80	148.08	150.87	151.08	149.08
Zambia	ZMB	117.69	121.61	121.16	124.75	123.66	131.35	126.87	129.36	131.33	126.28	123.06
Zimbabwe	ZWE	107.37	110.09	108.73	108.82	112.05	112.44	109.36	114.61	114.68	117.75	121.00

Table-A-05. Pena-Manhattan Synthetic Index of Globalization with norm1 maximization

Country	Code	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Angola	AGO	8.34	8.32	8.42	8.42	8.52	8.44	8.68	8.80	9.03	8.37	8.13
Albania	ALB	6.67	6.66	7.33	7.86	8.00	8.16	8.27	8.79	9.23	9.61	10.21
Argentina	ARG	10.74	10.76	10.33	10.43	10.15	10.25	9.82	9.81	9.81	9.68	9.43
Armenia	ARM	8.17	8.68	8.70	8.50	8.70	8.99	9.35	9.53	9.47	9.49	9.74
Australia	AUS	13.31	13.49	13.53	13.39	13.50	13.46	13.39	13.52	13.60	13.18	13.49
Austria	AUT	14.71	15.09	15.06	14.96	15.04	14.92	14.96	14.94	15.23	15.06	14.94
Azerbaijan	AZE	7.18	7.85	8.01	8.40	8.67	9.10	9.68	9.76	10.14	9.94	9.75
Burundi	BDI	4.13	4.55	4.57	4.53	4.84	4.98	5.21	5.40	6.25	6.12	6.24
Belgium	BEL	15.46	15.61	15.55	15.53	15.52	15.47	15.39	15.37	15.47	15.47	15.47
Benin	BEN	5.88	6.10	6.10	6.04	6.16	6.87	6.89	7.05	7.74	7.54	7.49
Burkina Faso	BFA	6.85	6.85	6.86	6.93	7.11	7.11	7.24	7.31	7.45	7.49	7.77
Bangladesh	BGD	5.19	5.62	5.75	5.92	5.92	6.31	6.48	6.70	6.99	6.97	6.90
Bulgaria	BGR	10.59	10.90	10.89	10.69	11.14	11.78	11.36	12.09	12.90	12.71	12.39
Bahrain	BHR	11.42	11.56	11.69	11.78	11.86	11.85	11.76	11.88	11.90	11.92	12.01
Bahamas, The	BHS	7.81	7.86	7.91	7.69	7.64	7.79	7.99	7.96	8.10	7.88	7.87
Bosnia & Herzegovina	BIH	8.26	9.03	9.21	9.23	9.39	9.82	9.60	10.96	11.22	10.94	10.85
Belize	BLZ	7.70	7.83	8.00	7.86	7.99	7.96	8.19	8.25	7.94	7.93	7.94
Bolivia	BOL	9.58	9.60	9.36	9.19	9.26	9.47	9.54	9.62	9.37	9.33	9.23
Brazil	BRA	9.43	9.35	9.95	10.04	9.79	9.99	10.11	10.06	10.20	9.93	10.04

Barbados	BRB	8.51	8.56	8.68	8.87	8.93	8.94	9.92	10.14	10.24	9.71	9.96
Botswana	BWA	8.60	9.04	9.01	9.33	9.23	9.17	8.77	9.46	9.63	9.15	9.19
Central African Rep	CAF	4.40	4.59	4.61	4.58	4.59	4.60	5.32	6.11	5.43	5.62	6.22
Canada	CAN	14.57	14.67	14.57	14.49	14.39	14.40	14.15	14.22	14.25	14.21	14.10
Switzerland	CHE	14.95	15.18	14.95	14.89	14.82	14.22	14.31	14.17	14.25	13.85	13.95
Chile	CHL	11.31	11.56	12.00	11.91	12.21	12.56	12.71	12.78	13.01	13.00	12.81
China	CHN	8.18	8.38	9.05	9.37	9.48	9.93	10.33	9.96	10.19	9.92	9.94
Cote d'Ivoire	CIV	7.07	7.26	7.24	7.43	7.39	7.43	7.59	7.75	8.21	8.18	8.20
Cameroon	CMR	6.61	6.56	6.49	6.94	6.93	7.60	7.42	7.23	7.51	7.70	7.89
Colombia	COL	8.58	8.61	8.73	8.72	9.11	9.19	9.04	9.50	9.65	9.27	9.35
Costa Rica	CRI	10.56	10.55	10.32	10.32	10.76	9.97	10.51	10.82	11.15	10.89	10.82
Cyprus	CYP	10.66	10.84	11.01	11.06	11.61	13.20	13.13	13.18	14.55	14.44	14.39
Czech Republic	CZE	13.20	13.44	13.61	13.82	13.77	14.34	14.53	14.46	14.60	14.49	14.47
Germany	DEU	13.53	13.83	13.75	13.86	13.88	13.81	13.78	13.78	13.84	13.65	13.55
Denmark	DNK	14.76	15.14	15.10	14.99	15.00	14.94	15.01	14.92	15.05	14.89	14.65
Dominican Republic	DOM	7.36	8.30	8.89	8.58	8.51	9.10	9.27	9.88	10.17	9.42	9.33
Algeria	DZA	8.14	8.42	8.38	8.81	8.88	9.10	9.32	9.39	8.48	8.84	9.38
Ecuador	ECU	8.91	9.05	8.91	8.85	9.40	9.63	9.68	9.65	9.60	9.21	8.86
Egypt, Arab Rep.	EGY	8.79	8.91	9.01	9.00	8.83	9.07	9.56	9.68	9.90	9.80	9.82
Spain	ESP	14.03	14.28	14.30	14.22	14.32	14.09	14.16	14.13	14.23	14.11	14.02
Estonia	EST	12.64	12.83	12.94	12.99	13.10	13.41	13.43	13.62	13.79	13.80	13.71
Ethiopia	ETH	5.33	5.54	5.62	5.57	6.31	6.64	6.65	6.58	6.51	6.31	6.11
Finland	FIN	14.59	14.81	14.77	14.62	14.52	14.65	14.37	14.41	14.58	14.40	14.17
Fiji	FJI	8.54	8.06	8.49	8.52	8.56	8.63	8.72	9.14	9.04	8.78	8.49
France	FRA	13.61	13.97	13.68	13.80	13.83	14.07	13.88	13.97	14.07	13.98	13.95
United Kingdom	GBR	14.54	14.66	14.53	14.54	14.61	14.40	14.48	14.38	14.35	14.26	14.29
Georgia	GEO	7.70	7.90	8.14	8.23	8.38	8.94	8.89	9.53	10.71	10.95	10.81
Ghana	GHA	7.50	8.18	8.24	8.50	8.99	9.49	9.20	8.90	9.21	8.92	9.33
Greece	GRC	12.79	13.04	13.32	13.19	13.45	13.53	13.36	13.46	13.68	13.67	13.48
Guatemala	GTM	8.41	8.42	8.58	8.65	8.62	9.64	10.14	10.34	10.49	10.48	10.43
Guyana	GUY	9.66	10.07	10.45	9.91	9.85	9.68	9.60	10.00	9.77	9.65	9.42
Honduras	HND	9.04	9.12	9.20	9.57	9.90	9.95	10.12	10.52	10.69	10.73	10.61
Croatia	HRV	10.32	10.26	10.48	10.86	11.32	12.29	12.42	12.56	12.79	12.76	12.74
Hungary	HUN	13.33	13.40	13.69	13.47	13.42	14.35	14.41	14.58	14.61	14.59	14.71
Indonesia	IDN	9.13	9.23	9.28	8.73	8.99	9.58	10.04	10.26	10.11	9.94	9.89
India	IND	7.07	7.26	7.43	7.60	7.81	7.86	8.31	8.49	8.70	8.65	8.62
Ireland	IRL	14.65	14.85	14.91	14.68	14.68	14.65	14.81	14.62	14.68	14.59	15.32
Iran, Islamic Rep.	IRN	5.74	6.11	6.10	6.91	7.06	6.34	6.43	6.87	6.41	6.40	6.77
Iceland	ISL	12.80	13.01	12.97	12.78	13.04	12.22	12.07	12.10	12.09	12.64	12.04
Israel	ISR	11.48	11.72	12.17	12.27	12.33	12.29	12.49	12.39	12.49	12.91	12.89
Italy	ITA	13.66	13.87	13.72	13.63	13.55	13.76	13.68	13.58	13.68	13.55	13.52
Jamaica	JAM	10.02	10.17	9.84	9.71	9.89	11.11	10.69	10.98	11.17	11.01	10.54
Jordan	JOR	10.32	10.63	10.92	11.07	11.28	11.21	11.52	11.59	11.88	11.89	11.69
Japan	JPN	10.11	10.39	10.24	10.12	10.61	10.67	10.73	11.05	11.07	10.77	10.86
Kazakhstan	KAZ	8.31	8.93	9.12	9.18	9.34	9.43	9.72	9.60	9.92	9.88	10.18
Kenya	KEN	7.20	7.31	7.36	7.60	7.78	7.91	7.93	7.99	8.16	8.12	8.39
Kyrgyz Republic	KGZ	8.81	9.31	9.10	8.94	8.69	9.10	9.11	9.55	9.98	9.84	9.69
Korea, Rep.	KOR	9.77	9.91	10.38	10.21	10.19	10.47	10.30	10.52	10.81	10.69	10.53
Kuwait	KWT	11.41	11.27	11.30	11.26	11.29	11.32	11.46	11.54	11.79	11.68	11.90
Sri Lanka	LKA	7.19	8.28	8.41	8.34	8.68	8.29	8.38	8.72	8.78	8.53	8.24
Lesotho	LSO	7.06	7.16	7.08	7.32	7.30	7.29	7.26	7.20	7.20	8.02	7.37
Lithuania	LTU	10.13	10.34	10.76	11.00	11.15	11.46	11.71	11.82	12.09	12.17	11.57
Luxembourg	LUX	13.75	13.79	13.87	13.99	14.10	14.26	13.97	13.84	14.65	14.62	14.65
Latvia	LVA	10.44	10.59	10.94	11.12	11.28	11.79	11.91	12.17	12.30	12.15	11.48
Morocco	MAR	7.59	8.16	8.73	9.05	9.38	9.02	9.61	9.55	9.83	9.85	10.00
Moldova	MDA	8.83	9.25	9.19	9.11	9.90	9.87	9.82	10.26	10.75	10.67	10.48

Madagascar	MDG	5.21	5.59	5.92	5.97	6.09	7.54	7.09	7.40	7.50	7.64	7.69
Mexico	MEX	9.84	9.93	9.71	9.76	9.67	9.64	10.13	9.89	10.01	9.99	10.19
Macedonia, FYR	MKD	7.05	7.71	7.88	8.24	8.32	8.41	9.38	9.18	10.75	10.31	10.17
Mali	MLI	6.07	6.14	6.54	7.26	7.50	7.74	7.51	8.11	7.69	7.74	8.01
Malta	MLT	11.29	11.30	11.01	11.72	11.63	12.96	12.95	13.10	13.21	13.21	13.27
Mongolia	MNG	7.06	7.28	7.28	8.06	8.32	8.35	8.65	9.17	9.06	9.21	9.96
Mozambique	MOZ	7.00	7.33	7.36	7.57	7.36	8.06	8.13	8.24	8.48	8.37	8.39
Mauritania	MRT	6.53	6.82	6.90	6.98	7.01	7.24	7.42	7.52	8.12	9.11	8.67
Mauritius	MUS	8.95	8.91	9.68	9.05	9.56	9.24	10.63	11.58	11.89	11.97	11.13
Malawi	MWI	6.21	6.25	6.72	6.91	6.95	7.10	6.93	7.01	7.28	7.61	7.05
Malaysia	MYS	12.00	12.12	12.40	12.50	12.40	12.62	12.51	12.67	12.70	12.57	12.66
Namibia	NAM	8.78	8.80	9.08	9.49	9.30	9.67	9.38	9.10	9.64	9.55	9.40
Niger	NER	5.14	5.29	5.14	5.23	5.24	5.40	5.47	6.15	5.76	5.85	6.24
Nigeria	NGA	8.89	9.11	9.09	8.89	9.24	9.17	9.56	9.78	10.31	10.13	10.16
Nicaragua	NIC	8.87	9.18	9.05	9.19	9.49	9.28	8.96	9.44	9.53	9.38	9.57
Netherlands	NLD	15.36	15.48	15.36	15.19	15.36	15.18	15.15	15.20	15.37	15.26	15.18
Norway	NOR	13.88	13.95	13.87	13.56	13.93	13.44	13.07	13.37	13.50	13.40	13.62
Nepal	NPL	5.28	5.97	6.04	6.08	5.74	5.79	6.16	6.17	6.12	6.09	6.21
New Zealand	NZL	13.47	13.77	13.66	13.61	13.44	13.48	13.44	13.57	13.52	13.56	13.38
Oman	OMN	9.65	9.94	10.32	9.49	9.49	9.68	10.05	10.03	10.53	10.53	10.71
Pakistan	PAK	7.21	7.57	7.89	8.58	8.16	8.16	8.42	8.50	8.75	8.64	8.59
Panama	PAN	10.69	10.90	11.09	10.82	10.90	11.09	11.02	11.21	11.43	11.53	11.74
Peru	PER	8.98	9.79	9.75	9.68	9.82	10.07	10.31	10.61	11.09	11.35	11.32
Philippines	PHL	9.01	9.29	9.48	9.57	9.42	10.12	10.01	9.91	9.75	9.42	9.52
Papua New Guinea	PNG	7.11	6.87	6.83	7.76	7.78	7.57	7.57	7.81	9.07	8.95	8.87
Poland	POL	11.70	11.91	11.64	11.93	12.34	13.33	12.92	13.24	13.49	13.28	13.45
Portugal	PRT	13.55	13.85	14.03	13.79	13.90	14.51	14.37	14.46	14.56	14.49	14.49
Paraguay	PRY	7.70	7.88	8.79	8.66	8.83	9.29	9.44	9.54	9.61	9.47	9.78
Romania	ROM	9.83	10.07	9.99	10.15	10.32	10.96	11.44	11.19	12.80	12.69	12.65
Russian Federation	RUS	9.46	10.20	10.45	10.72	10.77	10.78	10.80	10.73	10.93	10.46	10.81
Rwanda	RWA	4.27	4.54	5.00	5.09	5.23	5.41	5.61	5.72	5.94	6.30	6.53
Senegal	SEN	7.48	7.88	7.38	8.09	8.20	8.39	8.02	8.49	8.71	8.82	9.07
Singapore	SGP	14.34	14.37	14.62	14.57	14.79	14.67	14.00	14.72	14.89	15.04	15.04
Sierra Leone	SLE	5.02	5.36	5.18	5.29	5.40	6.61	6.62	6.49	6.58	6.50	6.74
El Salvador	SLV	9.64	9.72	9.91	10.17	10.23	10.60	10.50	10.78	10.89	11.11	10.91
Serbia	SRB	8.16	8.76	8.80	9.97	10.55	10.65	9.81	11.01	11.36	11.49	11.41
Slovak Republic	SVK	11.80	12.27	12.41	12.04	12.04	13.78	14.02	14.19	14.22	14.20	14.15
Slovenia	SVN	11.10	11.45	11.67	11.73	12.29	13.01	12.98	13.11	13.47	13.49	13.15
Sweden	SWE	14.79	14.87	14.76	14.82	14.83	14.86	14.87	14.83	14.82	14.75	14.74
Syrian Arab Republic	SYR	5.87	6.00	6.03	6.20	6.28	6.76	6.82	7.15	7.27	7.12	7.33
Chad	TCD	4.85	4.21	4.46	5.72	5.73	6.66	6.58	6.76	6.80	6.58	6.96
Togo	TGO	7.43	7.00	6.44	6.37	6.93	7.17	7.73	8.03	8.06	7.85	7.95
Thailand	THA	9.31	9.76	10.17	10.04	9.87	10.20	10.32	10.59	10.64	10.58	10.94
Trinidad and Tobago	TTO	10.21	10.33	10.72	10.07	10.03	9.78	10.11	10.27	10.23	10.30	10.41
Tunisia	TUN	9.04	9.18	9.34	9.56	9.55	9.74	10.25	9.99	10.16	10.16	10.06
Turkey	TUR	10.39	10.52	10.70	10.51	10.74	10.96	11.72	11.31	11.46	11.39	11.59
Tanzania	TZA	5.03	5.21	5.28	5.64	5.99	6.40	6.66	6.79	7.11	6.96	6.97
Uganda	UGA	5.79	6.13	6.43	6.46	6.93	8.08	7.55	7.73	8.04	8.28	8.42
Ukraine	UKR	9.45	9.87	9.78	9.88	9.94	10.25	10.49	10.61	10.99	11.24	11.48
Uruguay	URY	10.36	10.48	10.43	10.13	10.39	10.63	10.85	10.87	11.00	11.12	11.15
United States	USA	12.85	12.93	12.77	12.52	12.62	12.75	12.71	12.84	12.94	12.70	12.39
Venezuela, RB	VEN	9.99	10.08	9.95	9.73	10.07	9.65	9.64	9.42	9.02	8.75	8.34
Vietnam	VNM	6.33	6.59	6.70	6.88	6.99	7.30	7.50	7.84	8.23	8.43	8.28
South Africa	ZAF	10.25	10.54	10.81	10.82	10.73	10.56	10.72	10.87	11.07	11.05	10.89
Zambia	ZMB	8.85	9.22	9.20	9.36	9.27	9.85	9.54	9.82	10.05	9.76	9.45
Zimbabwe	ZWE	7.67	7.89	7.76	7.55	7.91	7.9	7.88	8.06	7.95	8.26	8.63

Table-A-06. Pena-Euclid Synthetic Index of Globalization with norm2 maximization

Country	Code	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Angola	AGO	6.32	6.29	6.38	6.35	6.44	6.35	6.57	6.66	6.86	6.62	6.47
Albania	ALB	6.60	6.65	7.13	7.51	7.66	7.71	7.97	8.26	8.59	8.99	9.38
Argentina	ARG	9.68	9.72	9.40	9.52	9.35	9.44	9.21	9.18	9.16	9.34	9.26
Armenia	ARM	7.04	7.48	7.51	7.34	7.56	7.97	8.26	8.50	8.52	8.56	8.71
Australia	AUS	12.65	12.84	12.87	12.82	12.86	12.81	12.74	12.86	12.91	12.70	12.85
Austria	AUT	14.05	14.35	14.36	14.32	14.36	14.35	14.47	14.50	14.69	14.60	14.53
Azerbaijan	AZE	6.48	7.06	7.22	7.56	7.91	8.34	8.78	8.82	9.06	9.00	8.94
Burundi	BDI	3.88	4.17	3.97	3.92	4.21	4.29	4.38	4.41	5.16	5.16	5.27
Belgium	BEL	14.50	14.66	14.59	14.59	14.58	14.62	14.61	14.64	14.75	14.76	14.75
Benin	BEN	5.70	5.86	5.98	5.92	5.99	6.33	6.31	6.41	7.69	7.33	7.14
Burkina Faso	BFA	5.99	6.03	5.86	5.94	6.10	6.14	6.32	6.49	6.65	6.69	6.90
Bangladesh	BGD	4.74	5.03	5.16	5.25	5.29	5.45	5.67	5.92	6.09	6.07	6.07
Bulgaria	BGR	9.88	10.17	10.22	10.15	10.42	10.67	10.61	11.14	11.58	11.57	11.28
Bahrain	BHR	11.62	11.59	11.69	11.71	11.84	11.86	11.75	11.79	11.75	11.70	11.72
Bahamas, The	BHS	9.74	9.64	9.70	9.53	9.49	9.65	9.70	9.62	9.72	9.52	9.59
Bosnia & Herzegovina	BIH	7.71	8.46	8.54	8.56	8.71	8.97	8.93	9.58	9.86	9.55	9.57
Belize	BLZ	8.59	8.82	9.00	8.87	9.03	8.90	8.97	8.98	8.95	8.96	8.89
Bolivia	BOL	8.21	8.18	8.18	7.91	8.02	8.37	8.50	8.60	8.58	8.52	8.42
Brazil	BRA	8.26	8.19	8.44	8.44	8.35	8.46	8.48	8.44	8.58	8.49	8.57
Barbados	BRB	9.67	9.74	9.81	10.00	10.10	10.10	10.57	10.69	10.77	10.09	10.31
Botswana	BWA	7.88	8.32	8.30	8.56	8.57	8.44	8.39	8.98	9.04	8.58	8.68
Central African Rep	CAF	4.15	4.33	4.34	4.29	4.29	4.28	4.93	5.30	5.03	5.20	5.49
Canada	CAN	13.93	14.01	13.95	13.87	13.75	13.78	13.71	13.74	13.76	13.71	13.62
Switzerland	CHE	14.52	14.70	14.63	14.55	14.51	14.31	14.39	14.36	14.44	14.29	14.31
Chile	CHL	9.93	10.15	10.40	10.32	10.49	10.80	10.90	10.91	11.15	11.05	10.92
China	CHN	7.19	7.35	7.65	7.71	7.90	8.22	8.57	8.50	8.65	8.51	8.49
Cote d'Ivoire	CIV	7.37	7.40	7.34	7.67	7.66	7.68	7.56	7.71	7.93	7.89	7.90
Cameroon	CMR	6.36	6.31	6.24	6.43	6.42	6.63	6.65	6.34	6.78	7.03	6.66
Colombia	COL	7.43	7.47	7.65	7.68	7.90	7.95	7.93	8.52	8.62	8.52	8.52
Costa Rica	CRI	9.74	9.73	9.57	9.57	9.88	9.46	9.94	10.15	10.34	10.15	10.05
Cyprus	CYP	11.16	11.37	11.56	11.60	11.82	12.60	12.59	12.71	14.13	14.09	14.00
Czech Republic	CZE	12.35	12.57	12.80	12.92	12.95	13.19	13.30	13.36	13.58	13.56	13.47
Germany	DEU	12.47	12.76	12.74	12.83	12.83	12.83	12.91	12.97	13.07	12.96	12.86
Denmark	DNK	13.76	14.16	14.19	14.09	14.07	14.06	14.28	14.26	14.36	14.29	14.11
Dominican Republic	DOM	7.77	8.73	8.91	8.37	8.54	9.21	9.12	9.49	9.65	8.92	8.86
Algeria	DZA	7.61	7.88	7.58	7.83	7.92	8.24	8.48	8.44	7.76	8.13	8.50
Ecuador	ECU	8.20	8.39	8.22	8.22	8.82	9.01	9.08	8.91	8.82	8.31	8.31
Egypt, Arab Rep.	EGY	8.04	8.13	8.22	8.28	8.22	8.46	8.86	8.95	9.07	9.04	9.09
Spain	ESP	12.73	13.00	13.14	13.12	13.20	13.17	13.31	13.40	13.50	13.42	13.29
Estonia	EST	11.63	11.91	12.01	12.07	12.21	12.45	12.44	12.66	12.78	12.80	12.70
Ethiopia	ETH	4.38	4.55	4.63	4.63	5.35	5.71	5.73	5.77	5.77	5.60	5.47
Finland	FIN	13.32	13.54	13.52	13.40	13.34	13.48	13.29	13.40	13.54	13.40	13.17
Fiji	FJI	9.13	8.89	9.34	9.38	9.34	9.38	9.32	9.68	9.52	9.42	9.03
France	FRA	12.79	13.11	12.99	12.99	13.02	13.17	13.19	13.30	13.42	13.38	13.33
United Kingdom	GBR	13.52	13.61	13.56	13.53	13.61	13.47	13.59	13.58	13.54	13.49	13.43
Georgia	GEO	6.84	7.16	7.33	7.46	7.67	8.03	8.08	8.63	9.28	9.51	9.43
Ghana	GHA	7.96	8.68	8.63	8.72	8.90	9.14	9.02	8.73	8.94	8.39	9.20
Greece	GRC	11.60	11.80	12.31	12.29	12.51	12.59	12.56	12.71	12.94	12.96	12.77
Guatemala	GTM	7.33	7.40	7.68	7.78	7.80	8.72	8.92	9.11	9.22	9.21	9.16
Guyana	GUY	9.18	9.59	9.81	9.25	9.19	9.21	8.98	9.51	9.24	8.98	8.81
Honduras	HND	8.14	8.29	8.35	8.60	8.74	8.86	9.02	9.22	9.35	9.48	9.35
Croatia	HRV	10.57	10.68	10.93	11.14	11.47	11.91	12.05	12.21	12.41	12.41	12.38

Hungary	HUN	12.63	12.69	12.78	12.64	12.64	13.01	13.22	13.45	13.54	13.53	13.58
Indonesia	IDN	7.69	7.71	7.59	7.18	7.20	7.64	7.96	7.99	8.00	7.89	7.87
India	IND	6.33	6.50	6.58	6.63	6.81	6.85	7.08	7.37	7.55	7.60	7.62
Ireland	IRL	13.99	14.11	14.21	14.11	14.09	14.07	14.18	14.12	14.15	14.10	14.84
Iran, Islamic Rep.	IRN	5.13	5.35	5.36	6.11	6.25	6.03	6.09	6.31	6.13	6.12	6.27
Iceland	ISL	12.27	12.47	12.59	12.43	12.59	12.00	12.01	12.03	12.12	12.78	12.24
Israel	ISR	10.93	11.10	11.50	11.51	11.56	11.66	11.79	11.82	11.92	12.39	12.34
Italy	ITA	12.34	12.59	12.51	12.55	12.54	12.58	12.59	12.63	12.76	12.71	12.62
Jamaica	JAM	9.52	9.63	9.58	9.51	9.76	10.63	10.19	10.35	10.59	10.53	10.29
Jordan	JOR	10.74	10.98	11.14	11.10	11.11	11.24	11.38	11.41	11.68	11.61	11.44
Japan	JPN	8.68	8.83	8.83	8.87	9.02	9.10	9.19	10.00	10.14	9.68	9.63
Kazakhstan	KAZ	7.47	8.09	8.31	8.46	8.58	8.73	8.97	8.96	9.55	9.54	9.62
Kenya	KEN	6.64	6.78	6.88	6.90	6.99	7.14	7.13	7.08	7.44	7.16	7.49
Kyrgyz Republic	KGZ	7.79	8.12	7.89	7.86	7.69	8.10	8.20	8.84	9.14	8.94	8.91
Korea, Rep.	KOR	8.84	9.07	9.30	9.25	9.29	9.43	9.21	9.31	9.68	9.72	9.71
Kuwait	KWT	11.26	10.96	11.04	11.03	11.01	11.06	11.08	11.29	11.59	11.50	11.62
Sri Lanka	LKA	6.79	7.64	7.73	7.70	7.86	7.84	7.88	8.16	8.23	8.12	7.79
Lesotho	LSO	6.99	6.92	6.48	6.65	6.55	6.55	6.37	6.37	6.37	7.11	6.48
Lithuania	LTU	9.34	9.52	9.75	9.90	10.01	10.23	10.50	10.70	10.92	11.06	10.51
Luxembourg	LUX	13.19	13.24	13.31	13.42	13.47	13.57	13.46	13.45	14.21	14.18	14.19
Latvia	LVA	9.81	10.02	10.22	10.28	10.48	10.88	11.06	11.37	11.40	11.26	10.67
Morocco	MAR	7.42	8.27	8.60	8.75	8.92	8.62	9.22	9.13	9.47	9.50	9.56
Moldova	MDA	8.05	8.37	8.29	8.23	9.07	9.07	9.06	9.36	9.74	9.66	9.62
Madagascar	MDG	4.48	4.65	4.79	4.69	4.78	5.99	5.85	6.17	6.31	6.42	6.48
Mexico	MEX	8.95	9.06	8.92	8.95	8.84	8.88	9.19	9.14	9.06	9.03	9.28
Macedonia, FYR	MKD	7.12	7.68	7.83	8.16	8.23	8.24	8.72	8.85	10.18	9.87	9.75
Mali	MLI	5.80	5.83	6.23	6.58	6.59	6.65	6.55	6.94	6.80	6.86	7.16
Malta	MLT	11.35	11.37	11.30	11.57	11.57	12.14	12.14	12.34	12.44	12.40	12.42
Mongolia	MNG	5.57	5.86	5.84	6.54	6.71	6.76	7.02	7.47	7.42	7.48	7.91
Mozambique	MOZ	6.69	7.02	7.12	7.31	7.03	7.27	7.37	7.39	7.42	7.28	7.19
Mauritania	MRT	6.18	6.43	6.54	6.56	6.50	6.58	6.70	6.64	7.29	8.12	7.90
Mauritius	MUS	8.41	8.34	9.03	8.80	9.36	9.30	9.96	10.53	10.84	10.97	10.22
Malawi	MWI	5.81	5.79	6.11	6.00	6.17	6.30	6.27	6.25	6.33	6.85	6.28
Malaysia	MYS	11.77	11.87	12.08	12.18	12.08	12.21	12.16	12.32	12.37	12.34	12.33
Namibia	NAM	9.37	9.50	9.57	9.76	9.46	9.90	9.77	9.61	9.97	9.93	9.86
Niger	NER	4.70	4.83	4.74	4.83	4.84	4.94	5.01	5.28	5.16	5.23	5.60
Nigeria	NGA	7.57	7.74	7.56	7.56	7.84	7.72	7.99	8.18	8.59	8.55	8.65
Nicaragua	NIC	7.77	8.04	7.96	8.08	8.26	8.29	8.09	8.36	8.37	8.31	8.38
Netherlands	NLD	14.44	14.56	14.52	14.40	14.51	14.44	14.47	14.56	14.68	14.63	14.55
Norway	NOR	13.03	13.14	13.14	13.02	13.21	13.13	13.02	13.21	13.34	13.32	13.40
Nepal	NPL	4.94	5.49	5.56	5.61	5.37	5.38	5.54	5.57	5.56	5.57	5.61
New Zealand	NZL	12.57	12.85	12.80	12.78	12.64	12.69	12.63	12.74	12.74	12.76	12.59
Oman	OMN	9.54	9.68	9.98	9.38	9.41	9.64	9.73	9.88	10.26	10.18	10.35
Pakistan	PAK	6.91	7.21	7.37	7.68	7.49	7.35	7.56	7.73	7.96	7.96	7.89
Panama	PAN	10.06	10.21	10.22	9.88	10.04	10.17	10.16	10.29	10.47	10.60	10.72
Peru	PER	7.44	8.22	8.32	8.33	8.52	8.76	9.01	9.21	9.52	9.53	9.46
Philippines	PHL	8.35	8.60	8.71	8.74	8.63	8.95	8.90	8.87	8.77	8.53	8.49
Papua New Guinea	PNG	7.00	6.76	6.84	7.15	7.00	6.78	6.69	6.86	7.29	7.15	7.05
Poland	POL	11.10	11.27	11.18	11.26	11.59	12.21	12.09	12.37	12.46	12.23	12.43
Portugal	PRT	12.51	12.82	12.96	12.85	12.93	13.59	13.57	13.70	13.84	13.80	13.73
Paraguay	PRY	7.06	7.28	7.97	7.85	7.93	8.24	8.36	8.51	8.56	8.49	8.76
Romania	ROM	8.98	9.17	9.27	9.37	9.53	10.00	10.22	10.29	11.46	11.39	11.29
Russian Federation	RUS	9.09	9.90	10.00	10.22	10.37	10.34	10.41	10.42	10.54	10.18	10.40
Rwanda	RWA	4.22	4.38	4.67	4.68	4.72	4.80	5.26	5.43	5.85	6.09	6.26
Senegal	SEN	7.52	7.68	7.61	7.99	8.15	8.28	8.17	8.33	8.49	8.58	8.79
Singapore	SGP	13.85	13.94	14.13	14.12	14.22	14.14	13.51	14.21	14.35	14.43	14.42

Sierra Leone	SLE	4.42	4.61	4.57	4.67	4.71	5.79	5.79	5.72	5.85	5.80	5.87
El Salvador	SLV	8.56	8.67	8.84	9.11	9.21	9.50	9.49	9.74	9.85	9.92	9.82
Serbia	SRB	8.07	8.63	8.65	9.79	10.31	10.29	9.49	10.64	10.76	10.94	10.86
Slovak Republic	SVK	10.91	11.27	11.45	11.30	11.33	12.28	12.63	12.80	12.94	13.04	12.99
Slovenia	SVN	10.79	11.10	11.30	11.45	11.72	12.18	12.17	12.39	12.71	12.79	12.55
Sweden	SWE	13.92	14.02	13.98	14.01	13.99	14.07	14.11	14.11	14.09	14.04	13.99
Syrian Arab Republic	SYR	6.14	6.34	6.33	6.48	6.60	6.90	6.96	7.16	7.24	7.20	7.29
Chad	TCO	4.83	4.17	4.52	5.28	5.33	6.14	6.12	6.27	6.29	6.23	6.45
Togo	TGO	7.29	7.01	6.64	6.63	7.20	7.23	7.74	7.73	7.76	7.57	7.62
Thailand	THA	8.49	8.86	9.19	9.14	9.09	9.23	9.38	9.51	9.56	9.50	9.71
Trinidad and Tobago	TTO	9.70	9.88	9.92	9.46	9.36	9.15	9.46	9.54	9.44	9.45	9.56
Tunisia	TUN	8.74	8.87	9.02	9.07	9.09	9.21	9.48	9.41	9.55	9.58	9.44
Turkey	TUR	9.14	9.32	9.55	9.33	9.43	9.55	10.38	10.17	10.36	10.44	10.64
Tanzania	TZA	4.69	4.81	4.85	5.00	5.22	5.47	5.54	5.70	5.96	5.80	5.94
Uganda	UGA	4.94	5.09	5.30	5.36	5.73	6.65	6.42	6.58	6.81	6.95	7.00
Ukraine	UKR	9.03	9.43	9.58	9.60	9.76	9.89	10.12	10.23	10.47	10.68	10.81
Uruguay	URY	9.53	9.59	9.65	9.36	9.75	9.94	10.04	10.07	10.15	10.24	10.24
United States	USA	11.71	11.80	11.69	11.57	11.63	11.78	11.83	11.96	12.02	11.87	11.66
Venezuela, RB	VEN	9.11	9.08	9.06	9.14	9.31	8.74	8.80	8.71	8.50	8.28	7.92
Vietnam	VNM	5.55	5.85	5.91	6.09	6.19	6.38	6.43	6.71	7.04	7.22	6.93
South Africa	ZAF	9.32	9.51	9.73	9.78	9.71	9.65	9.80	9.93	10.13	10.15	9.96
Zambia	ZMB	7.79	8.07	7.99	8.19	8.16	8.63	8.36	8.51	8.66	8.25	8.02
Zimbabwe	ZWE	7.46	7.63	7.57	7.55	7.67	7.75	7.55	7.93	7.92	8.04	8.38

Table-A-07. Pena-Wald Synthetic Index of Globalization on Maxi-min criterion												
Country	Code	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Angola	AGO	8.39	8.37	8.48	8.46	8.61	8.49	8.73	8.86	9.13	8.55	8.33
Albania	ALB	7.23	7.24	7.87	8.34	8.55	8.71	8.85	9.32	9.74	10.11	10.70
Argentina	ARG	11.58	11.62	11.25	11.36	11.13	11.21	10.82	10.81	10.83	10.70	10.49
Armenia	ARM	7.93	8.38	8.43	8.29	8.56	8.85	9.20	9.44	9.49	9.50	9.75
Australia	AUS	13.85	14.09	14.14	14.01	14.10	14.05	13.98	14.12	14.22	13.85	14.13
Austria	AUT	15.32	15.68	15.66	15.56	15.62	15.53	15.58	15.57	15.82	15.68	15.57
Azerbaijan	AZE	7.28	7.95	8.15	8.56	8.88	9.26	9.79	9.89	10.29	10.13	9.96
Burundi	BDI	4.43	4.80	4.80	4.75	5.08	5.21	5.42	5.61	6.76	6.69	6.84
Belgium	BEL	15.94	16.09	16.03	16.01	16.00	15.96	15.89	15.93	16.05	16.05	16.05
Benin	BEN	6.64	6.85	6.93	6.84	6.97	7.65	7.68	7.85	8.52	8.32	8.30
Burkina Faso	BFA	7.43	7.43	7.46	7.54	7.73	7.75	7.92	8.05	8.18	8.23	8.50
Bangladesh	BGD	6.15	6.55	6.69	6.84	6.84	7.19	7.36	7.56	7.85	7.84	7.78
Bulgaria	BGR	11.36	11.65	11.65	11.48	11.88	12.41	12.04	12.72	13.43	13.30	12.94
Bahrain	BHR	11.20	11.29	11.43	11.51	11.63	11.67	11.61	11.71	11.76	11.80	11.89
Bahamas, The	BHS	8.13	8.18	8.22	7.99	7.97	8.12	8.30	8.27	8.43	8.24	8.27
Bosnia & Herzegovina	BIH	8.25	9.33	9.58	9.59	9.76	10.17	10.02	11.25	11.55	11.30	11.24
Belize	BLZ	7.78	7.95	8.18	7.99	8.12	8.13	8.34	8.42	8.18	8.18	8.24
Bolivia	BOL	10.10	10.16	9.97	9.77	9.85	10.11	10.19	10.27	10.07	10.03	9.93
Brazil	BRA	10.33	10.26	10.79	10.86	10.65	10.88	10.99	10.94	11.09	10.86	10.97
Barbados	BRB	8.53	8.58	8.72	8.89	8.95	8.96	9.82	10.01	10.11	9.52	9.88
Botswana	BWA	8.48	8.90	8.89	9.18	9.14	9.08	8.75	9.73	9.92	9.34	9.51
Central African Rep	CAF	4.85	5.03	5.04	4.98	5.01	5.00	6.01	6.74	6.17	6.38	6.92
Canada	CAN	15.13	15.22	15.14	15.06	14.97	14.98	14.77	14.83	14.85	14.81	14.72
Switzerland	CHE	15.47	15.68	15.50	15.43	15.38	14.87	14.96	14.85	14.93	14.59	14.69
Chile	CHL	11.91	12.15	12.56	12.46	12.72	13.10	13.24	13.30	13.53	13.53	13.37
China	CHN	9.05	9.24	9.84	10.09	10.22	10.65	11.03	10.77	10.99	10.75	10.78

Cote d'Ivoire	CIV	7.63	7.72	7.74	7.91	7.88	7.93	8.05	8.21	8.61	8.60	8.61
Cameroon	CMR	7.39	7.34	7.29	7.69	7.70	8.26	8.13	7.99	8.26	8.45	8.58
Colombia	COL	9.02	9.04	9.18	9.17	9.51	9.58	9.46	10.22	10.37	10.04	10.14
Costa Rica	CRI	10.72	10.70	10.50	10.47	10.90	10.19	10.70	10.98	11.30	11.07	11.01
Cyprus	CYP	10.82	11.00	11.19	11.21	11.69	13.09	13.06	13.15	14.83	14.75	14.71
Czech Republic	CZE	13.62	13.88	14.12	14.31	14.28	14.77	14.94	14.89	15.07	14.96	14.92
Germany	DEU	14.01	14.31	14.24	14.36	14.38	14.32	14.32	14.35	14.45	14.26	14.17
Denmark	DNK	15.27	15.62	15.60	15.49	15.47	15.44	15.53	15.45	15.59	15.44	15.22
Dominican Republic	DOM	7.78	9.00	9.51	8.87	8.85	9.75	9.88	10.46	10.74	9.71	9.64
Algeria	DZA	9.03	9.30	9.25	9.64	9.70	9.92	10.12	10.17	9.03	9.69	10.18
Ecuador	ECU	9.33	9.45	9.31	9.22	10.08	10.36	10.43	10.41	10.38	10.02	9.72
Egypt, Arab Rep.	EGY	9.81	9.91	10.00	9.98	9.83	10.05	10.52	10.66	10.85	10.76	10.80
Spain	ESP	14.54	14.79	14.83	14.76	14.83	14.64	14.74	14.76	14.88	14.77	14.69
Estonia	EST	12.54	12.78	12.93	12.99	13.12	13.49	13.52	13.71	13.89	13.95	13.88
Ethiopia	ETH	5.91	6.11	6.19	6.16	7.20	7.58	7.63	7.62	7.57	7.40	7.22
Finland	FIN	15.05	15.26	15.24	15.06	15.00	15.18	14.84	14.92	15.10	14.90	14.70
Fiji	FJI	9.18	8.80	9.21	9.23	9.30	9.32	9.37	9.79	9.70	9.46	9.21
France	FRA	14.26	14.60	14.35	14.43	14.46	14.68	14.54	14.64	14.75	14.66	14.63
United Kingdom	GBR	15.11	15.23	15.12	15.12	15.19	14.99	15.06	14.99	14.96	14.88	14.89
Georgia	GEO	7.53	7.81	8.04	8.14	8.36	8.84	8.83	9.50	10.60	10.88	10.78
Ghana	GHA	8.55	9.22	9.28	9.48	9.90	10.33	10.06	9.77	10.05	9.79	10.19
Greece	GRC	13.28	13.51	13.85	13.76	14.00	14.08	13.92	14.07	14.31	14.31	14.11
Guatemala	GTM	8.78	8.82	8.97	9.04	9.00	10.30	10.76	10.99	11.15	11.15	11.10
Guyana	GUY	9.65	10.07	10.41	9.88	9.83	9.70	9.63	10.05	9.82	9.65	9.45
Honduras	HND	9.54	9.63	9.73	10.07	10.39	10.44	10.58	10.92	11.11	11.16	11.04
Croatia	HRV	10.71	10.71	10.99	11.36	11.82	12.72	12.85	13.03	13.30	13.28	13.28
Hungary	HUN	13.97	14.04	14.29	14.09	14.08	14.87	14.92	15.09	15.14	15.13	15.24
Indonesia	IDN	9.89	9.99	10.01	9.53	9.76	10.29	10.72	10.93	10.83	10.70	10.67
India	IND	8.18	8.40	8.54	8.68	8.87	8.92	9.34	9.53	9.75	9.72	9.68
Ireland	IRL	15.03	15.21	15.28	15.09	15.08	15.06	15.19	15.02	15.12	15.02	15.78
Iran, Islamic Rep.	IRN	6.12	6.45	6.45	7.49	7.68	7.03	7.12	7.55	7.18	7.18	7.50
Iceland	ISL	13.05	13.27	13.25	13.08	13.27	12.16	12.05	12.12	12.15	13.04	12.50
Israel	ISR	11.59	11.82	12.27	12.36	12.43	12.44	12.62	12.57	12.67	13.41	13.42
Italy	ITA	14.27	14.48	14.36	14.29	14.20	14.37	14.33	14.28	14.41	14.30	14.27
Jamaica	JAM	10.14	10.29	10.03	9.89	10.06	11.50	11.10	11.36	11.54	11.43	11.02
Jordan	JOR	11.06	11.42	11.69	11.79	11.98	11.96	12.25	12.29	12.57	12.55	12.37
Japan	JPN	10.79	11.03	10.91	10.87	11.28	11.34	11.37	11.76	11.80	11.51	11.60
Kazakhstan	KAZ	8.22	8.88	9.10	9.20	9.36	9.43	9.70	9.64	10.37	10.35	10.62
Kenya	KEN	8.12	8.27	8.35	8.54	8.71	8.81	8.83	8.89	9.07	9.01	9.27
Kyrgyz Republic	KGZ	9.03	9.56	9.35	9.23	9.04	9.42	9.48	9.96	10.36	10.22	10.10
Korea, Rep.	KOR	10.47	10.67	11.11	10.97	10.96	11.17	11.03	11.24	11.57	11.48	11.37
Kuwait	KWT	11.49	11.36	11.39	11.33	11.36	11.44	11.57	11.68	11.96	11.85	12.05
Sri Lanka	LKA	7.55	8.89	9.01	8.94	9.23	8.97	9.08	9.44	9.51	9.30	9.02
Lesotho	LSO	7.13	7.19	7.10	7.35	7.34	7.32	7.34	7.25	7.24	8.37	7.42
Lithuania	LTU	9.98	10.21	10.59	10.80	10.97	11.32	11.55	11.69	11.99	12.22	11.64
Luxembourg	LUX	13.62	13.65	13.75	13.83	13.94	14.09	13.84	13.77	14.91	14.88	14.90
Latvia	LVA	10.27	10.44	10.74	10.91	11.09	11.63	11.77	12.10	12.24	12.11	11.50
Morocco	MAR	8.18	9.10	9.68	9.98	10.28	9.99	10.52	10.49	10.75	10.75	10.89
Moldova	MDA	8.58	8.95	8.87	8.80	9.89	9.88	9.88	10.35	10.85	10.76	10.59
Madagascar	MDG	5.57	5.91	6.20	6.18	6.31	8.00	7.63	8.00	8.15	8.28	8.33
Mexico	MEX	10.33	10.41	10.23	10.26	10.20	10.16	10.58	10.39	10.51	10.49	10.68
Macedonia, FYR	MKD	6.84	7.41	7.62	7.98	8.09	8.14	9.00	8.88	10.69	10.30	10.20
Mali	MLI	6.98	7.01	7.42	8.04	8.29	8.49	8.28	8.84	8.51	8.52	8.78
Malta	MLT	11.16	11.18	10.94	11.51	11.47	12.65	12.65	12.85	13.00	13.00	13.10
Mongolia	MNG	7.07	7.29	7.32	8.38	8.69	8.71	9.06	9.62	9.55	9.68	10.39
Mozambique	MOZ	7.55	7.89	8.01	8.19	7.99	8.63	8.75	8.81	9.05	8.96	8.94

Mauritania	MRT	6.80	7.08	7.21	7.26	7.30	7.51	7.69	7.77	8.32	9.59	9.17
Mauritius	MUS	8.83	8.79	9.52	8.97	9.83	9.55	10.76	11.64	11.95	12.02	10.94
Malawi	MWI	6.39	6.45	6.90	7.03	7.12	7.30	7.17	7.26	7.53	7.98	7.48
Malaysia	MYS	12.49	12.60	12.89	13.06	12.98	13.20	13.10	13.28	13.33	13.23	13.31
Namibia	NAM	9.19	9.21	9.45	9.82	9.65	10.12	9.90	9.68	10.17	10.07	9.92
Niger	NER	6.02	6.18	6.01	6.13	6.15	6.37	6.44	7.05	6.72	6.77	7.17
Nigeria	NGA	9.82	10.07	10.06	9.86	10.20	10.09	10.43	10.64	11.14	10.99	11.02
Nicaragua	NIC	9.12	9.42	9.32	9.44	9.68	9.51	9.23	9.66	9.77	9.64	9.82
Netherlands	NLD	15.87	15.99	15.89	15.69	15.86	15.68	15.64	15.73	15.92	15.80	15.71
Norway	NOR	14.38	14.46	14.42	14.14	14.46	14.05	13.75	14.03	14.17	14.11	14.31
Nepal	NPL	5.99	6.62	6.72	6.79	6.51	6.60	6.92	6.95	6.91	6.90	7.01
New Zealand	NZL	13.74	14.09	14.00	13.94	13.75	13.77	13.72	13.86	13.86	13.89	13.75
Oman	OMN	9.58	9.83	10.15	9.40	9.42	9.60	9.95	9.96	10.46	10.45	10.64
Pakistan	PAK	8.29	8.62	8.92	9.51	9.16	9.16	9.43	9.51	9.76	9.67	9.61
Panama	PAN	10.89	11.07	11.23	10.94	11.04	11.21	11.16	11.36	11.61	11.73	11.91
Peru	PER	9.38	10.46	10.45	10.35	10.50	10.79	11.05	11.34	11.79	11.99	11.95
Philippines	PHL	9.76	10.12	10.30	10.34	10.21	10.88	10.80	10.73	10.59	10.30	10.37
Papua New Guinea	PNG	7.32	7.13	7.13	7.89	7.93	7.72	7.71	7.99	9.07	8.96	8.86
Poland	POL	12.46	12.68	12.46	12.70	13.09	13.96	13.63	13.93	14.16	13.96	14.13
Portugal	PRT	14.02	14.37	14.55	14.33	14.43	15.01	14.86	14.98	15.13	15.07	15.06
Paraguay	PRY	8.02	8.20	9.39	9.30	9.46	9.93	10.06	10.17	10.26	10.12	10.43
Romania	ROM	10.63	10.86	10.83	10.99	11.15	11.74	12.14	11.96	13.47	13.36	13.30
Russian Federation	RUS	10.14	10.91	11.15	11.40	11.48	11.49	11.53	11.49	11.70	11.28	11.61
Rwanda	RWA	4.66	4.90	5.34	5.37	5.49	5.66	6.24	6.43	6.65	7.04	7.31
Senegal	SEN	8.50	8.82	8.44	9.04	9.15	9.34	9.03	9.45	9.65	9.75	10.00
Singapore	SGP	14.34	14.43	14.75	14.69	14.87	14.67	13.73	14.77	15.01	15.18	15.19
Sierra Leone	SLE	5.37	5.68	5.53	5.61	5.72	7.17	7.22	7.13	7.17	7.15	7.38
El Salvador	SLV	10.11	10.19	10.39	10.65	10.68	11.05	10.98	11.29	11.42	11.62	11.46
Serbia	SRB	7.95	8.56	8.68	10.34	11.12	11.22	9.96	11.62	11.93	12.03	11.96
Slovak Republic	SVK	12.14	12.63	12.83	12.54	12.57	14.14	14.34	14.53	14.59	14.59	14.55
Slovenia	SVN	11.39	11.76	12.01	12.14	12.64	13.30	13.28	13.45	13.82	13.87	13.57
Sweden	SWE	15.37	15.46	15.37	15.42	15.43	15.47	15.49	15.45	15.45	15.38	15.35
Syrian Arab Republic	SYR	6.45	6.58	6.60	6.72	6.82	7.25	7.32	7.63	7.75	7.63	7.80
Chad	TCD	5.66	4.64	4.93	6.02	6.05	7.27	7.21	7.44	7.47	7.30	7.65
Togo	TGO	8.16	7.73	6.90	6.83	7.70	8.00	8.50	8.80	8.84	8.63	8.74
Thailand	THA	9.92	10.43	10.87	10.76	10.62	10.84	10.98	11.24	11.29	11.24	11.57
Trinidad and Tobago	TTO	10.23	10.35	10.68	10.05	10.02	9.78	10.09	10.24	10.22	10.29	10.40
Tunisia	TUN	9.88	10.03	10.23	10.40	10.40	10.57	11.02	10.81	10.98	10.98	10.87
Turkey	TUR	11.14	11.29	11.50	11.31	11.52	11.68	12.43	12.11	12.18	12.21	12.40
Tanzania	TZA	5.67	5.86	5.93	6.22	6.52	6.92	7.13	7.25	7.56	7.42	7.46
Uganda	UGA	6.19	6.47	6.75	6.80	7.23	8.62	8.18	8.39	8.70	8.93	9.07
Ukraine	UKR	9.98	10.45	10.46	10.53	10.64	10.92	11.16	11.30	11.69	11.93	12.16
Uruguay	URY	10.99	11.12	11.13	10.85	11.15	11.39	11.58	11.60	11.73	11.83	11.83
United States	USA	13.48	13.56	13.42	13.21	13.30	13.40	13.37	13.51	13.60	13.38	13.09
Venezuela, RB	VEN	10.74	10.81	10.71	10.54	10.85	10.12	10.11	9.92	9.56	9.31	8.95
Vietnam	VNM	6.67	6.93	7.02	7.19	7.32	7.60	7.80	8.17	8.56	8.75	8.61
South Africa	ZAF	10.81	11.11	11.42	11.45	11.42	11.31	11.48	11.62	11.82	11.82	11.66
Zambia	ZMB	9.40	9.83	9.84	9.96	9.90	10.47	10.16	10.46	10.64	10.38	10.09
Zimbabwe	ZWE	8.35	8.59	8.48	8.27	8.60	8.57	8.58	8.81	8.72	9.00	9.35

Table-A-08. Pena-Shannon Synthetic Index of Globalization with Shannon Entropy maximization

Country	Code	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Angola	AGO	7.76	7.69	7.78	7.73	7.79	7.68	7.98	8.05	8.26	8.06	7.84
Albania	ALB	6.09	6.02	6.47	6.83	7.03	7.10	7.31	7.67	8.10	8.64	9.17
Argentina	ARG	10.35	10.46	10.10	10.60	10.43	10.50	10.16	10.10	10.03	9.78	9.73
Armenia	ARM	6.72	7.23	7.12	7.02	7.31	7.84	8.01	8.13	8.07	8.00	8.40
Australia	AUS	13.02	13.16	13.25	13.20	13.30	13.24	13.21	13.37	13.49	13.21	13.41
Austria	AUT	14.30	14.68	14.74	14.70	14.73	14.77	14.92	14.99	15.23	15.11	15.00
Azerbaijan	AZE	6.65	7.66	7.80	8.21	8.54	9.15	9.66	9.61	9.74	9.54	9.37
Burundi	BDI	3.61	4.01	4.02	3.91	4.28	4.45	4.59	4.51	5.27	5.30	5.40
Belgium	BEL	15.19	15.34	15.30	15.28	15.27	15.29	15.31	15.37	15.49	15.51	15.45
Benin	BEN	5.74	5.95	5.93	5.87	5.97	6.24	6.20	6.33	7.15	6.82	6.93
Burkina Faso	BFA	5.73	5.69	5.60	5.65	5.74	5.84	5.98	6.14	6.48	6.54	6.81
Bangladesh	BGD	4.60	5.06	5.18	5.25	5.28	5.48	5.75	5.99	6.29	6.29	6.26
Bulgaria	BGR	10.52	10.88	10.89	10.73	11.07	11.34	11.14	11.88	12.37	12.17	11.81
Bahrain	BHR	11.52	11.53	11.63	11.68	11.74	11.82	11.75	11.81	11.82	11.83	11.86
Bahamas, The	BHS	9.59	9.62	9.56	9.25	9.15	9.29	9.50	9.56	9.65	9.22	9.30
Bosnia & Herzegovina	BIH	7.29	7.99	8.18	8.16	8.34	8.67	8.69	9.38	9.80	9.52	9.29
Belize	BLZ	8.32	8.62	8.84	8.66	8.85	8.80	8.94	9.02	9.02	9.03	9.00
Bolivia	BOL	9.11	9.13	9.09	8.48	8.49	8.79	8.92	9.00	8.99	8.87	8.74
Brazil	BRA	9.26	9.15	9.51	9.53	9.46	9.53	9.51	9.47	9.61	9.42	9.56
Barbados	BRB	8.89	8.97	9.10	9.27	9.35	9.39	9.95	10.13	10.23	9.81	10.08
Botswana	BWA	8.08	8.46	8.29	8.68	8.74	8.51	8.42	8.99	9.14	8.56	8.55
Central African Rep	CAF	4.53	4.80	4.78	4.71	4.69	4.69	5.42	5.80	5.47	5.64	5.97
Canada	CAN	14.41	14.47	14.38	14.27	14.14	14.12	14.07	14.09	14.12	14.06	13.91
Switzerland	CHE	14.83	15.08	15.00	14.90	14.88	14.70	14.82	14.82	14.93	14.75	14.73
Chile	CHL	10.77	11.07	11.33	11.25	11.53	11.82	11.93	11.99	12.20	12.16	12.02
China	CHN	8.58	8.77	9.04	9.08	9.24	9.51	9.96	9.91	10.00	9.74	9.72
Cote d'Ivoire	CIV	7.45	7.57	7.53	7.81	7.76	7.79	7.75	7.90	8.11	7.99	7.99
Cameroon	CMR	6.98	6.84	6.71	6.90	6.87	7.05	7.11	6.76	7.07	7.25	7.28
Colombia	COL	8.11	8.15	8.41	8.44	8.73	8.74	8.73	9.38	9.45	9.32	9.34
Costa Rica	CRI	10.16	10.09	9.81	9.71	10.15	9.56	10.20	10.42	10.68	10.30	10.26
Cyprus	CYP	10.93	11.22	11.46	11.54	11.74	12.48	12.51	12.69	14.58	14.54	14.46
Czech Republic	CZE	12.96	13.30	13.61	13.77	13.82	14.16	14.21	14.31	14.51	14.35	14.36
Germany	DEU	12.43	12.86	12.82	12.94	12.93	12.94	13.06	13.22	13.37	13.20	13.03
Denmark	DNK	14.25	14.75	14.75	14.62	14.54	14.52	14.78	14.80	14.92	14.84	14.58
Dominican Republic	DOM	7.77	8.77	9.03	8.54	8.93	9.63	9.37	9.82	9.98	9.11	8.97
Algeria	DZA	7.77	8.09	8.00	8.30	8.34	8.53	8.70	8.66	7.75	8.18	8.71
Ecuador	ECU	9.28	9.43	9.11	8.99	9.55	9.77	9.79	9.71	9.70	9.24	8.92
Egypt, Arab Rep.	EGY	8.40	8.46	8.55	8.60	8.59	8.84	9.33	9.42	9.49	9.43	9.43
Spain	ESP	13.18	13.52	13.66	13.61	13.57	13.56	13.72	13.90	14.05	13.95	13.79
Estonia	EST	11.53	11.90	12.07	12.21	12.36	12.67	12.70	12.90	13.03	13.04	12.89
Ethiopia	ETH	4.68	4.84	5.01	5.08	5.86	6.28	6.26	6.27	6.16	5.92	5.74
Finland	FIN	13.90	14.24	14.22	14.06	14.05	14.17	14.02	14.18	14.34	14.21	13.83
Fiji	FJI	9.42	9.01	9.68	9.59	9.73	9.90	9.75	10.26	10.02	9.73	9.37
France	FRA	12.57	13.02	12.90	12.86	12.90	13.11	13.19	13.36	13.48	13.41	13.31
United Kingdom	GBR	13.65	13.78	13.74	13.68	13.72	13.61	13.74	13.79	13.75	13.71	13.67
Georgia	GEO	6.88	7.35	7.54	7.75	7.94	8.17	8.15	8.72	9.51	9.83	9.81
Ghana	GHA	7.79	8.78	8.69	8.79	8.85	9.08	8.86	8.15	8.35	8.24	8.79
Greece	GRC	11.24	11.53	12.47	12.38	12.67	12.76	12.75	13.01	13.32	13.34	13.08
Guatemala	GTM	7.85	8.00	8.30	8.35	8.35	9.28	9.41	9.63	9.75	9.67	9.61
Guyana	GUY	9.65	10.48	10.67	9.74	9.68	9.47	9.33	10.20	9.63	9.05	8.89
Honduras	HND	8.87	9.01	9.07	9.42	9.61	9.77	9.94	10.12	10.16	10.35	10.15
Croatia	HRV	10.03	10.23	10.59	10.82	11.26	11.70	11.81	12.06	12.34	12.24	12.15

Hungary	HUN	13.59	13.69	13.78	13.63	13.63	14.09	14.19	14.50	14.57	14.56	14.65
Indonesia	IDN	9.03	9.06	8.78	8.15	8.15	8.75	9.22	9.20	9.23	9.02	9.00
India	IND	6.88	7.11	7.19	7.28	7.42	7.47	7.75	8.08	8.30	8.37	8.34
Ireland	IRL	14.12	14.25	14.32	14.22	14.20	14.15	14.25	14.18	14.23	14.16	15.40
Iran, Islamic Rep.	IRN	4.65	4.92	4.97	5.84	6.05	5.82	5.89	6.10	5.88	5.87	6.05
Iceland	ISL	12.21	12.52	12.75	12.49	12.76	12.33	12.50	12.63	12.69	13.41	12.47
Israel	ISR	10.82	11.07	11.88	11.96	12.04	12.13	12.27	12.41	12.51	12.91	12.84
Italy	ITA	12.85	13.08	12.98	13.00	12.95	12.99	13.03	13.14	13.32	13.25	13.09
Jamaica	JAM	9.89	10.04	9.98	9.94	10.15	11.04	10.18	10.42	10.64	10.56	10.24
Jordan	JOR	10.77	11.28	11.37	11.24	11.33	11.44	11.73	11.71	11.96	11.70	11.42
Japan	JPN	8.45	8.59	8.61	8.65	8.80	8.87	8.95	10.12	10.26	10.03	9.98
Kazakhstan	KAZ	7.45	8.35	8.58	8.65	8.79	8.90	9.20	9.23	9.86	9.85	9.89
Kenya	KEN	6.56	6.75	6.82	6.90	6.89	7.07	7.06	6.97	7.25	7.14	7.30
Kyrgyz Republic	KGZ	8.49	9.04	8.59	8.46	7.85	8.36	8.34	9.21	9.46	9.01	9.16
Korea, Rep.	KOR	9.30	9.46	9.69	9.53	9.61	9.81	9.75	9.87	10.24	10.34	10.32
Kuwait	KWT	11.06	10.71	10.62	10.52	10.53	10.67	10.89	11.15	11.65	11.44	11.57
Sri Lanka	LKA	7.25	8.13	8.09	7.96	8.09	8.07	8.04	8.40	8.45	8.35	7.78
Lesotho	LSO	7.12	7.17	7.12	7.37	7.28	7.27	7.23	7.22	7.24	8.03	7.36
Lithuania	LTU	9.22	9.46	9.75	9.91	10.10	10.41	10.62	10.91	11.21	11.27	10.50
Luxembourg	LUX	13.15	13.21	13.28	13.35	13.42	13.51	13.40	13.39	14.19	14.17	14.18
Latvia	LVA	9.61	9.73	9.93	10.02	10.32	10.89	11.02	11.44	11.45	11.27	10.25
Morocco	MAR	7.77	8.58	8.98	9.09	9.21	9.10	9.49	9.52	9.84	9.84	9.89
Moldova	MDA	8.76	9.19	8.94	8.81	9.64	9.47	9.41	9.83	10.21	10.01	9.94
Madagascar	MDG	4.87	5.02	5.19	5.14	5.15	6.52	6.26	6.84	7.12	7.31	7.39
Mexico	MEX	9.39	9.46	9.36	9.32	9.26	9.26	9.54	9.51	9.56	9.51	9.71
Macedonia, FYR	MKD	6.60	7.24	7.37	7.86	8.03	8.07	8.74	8.76	10.37	9.84	9.67
Mali	MLI	6.28	6.30	6.91	7.37	7.18	7.24	7.13	7.58	7.32	7.29	7.64
Malta	MLT	11.60	11.66	11.56	11.79	11.84	12.41	12.41	12.64	12.74	12.69	12.74
Mongolia	MNG	6.00	6.46	6.44	7.24	7.53	7.52	7.93	8.56	8.43	8.52	9.10
Mozambique	MOZ	6.92	7.34	7.57	7.94	7.54	7.94	8.12	8.30	8.35	8.21	7.97
Mauritania	MRT	6.26	6.67	6.70	6.81	6.84	7.22	7.49	7.38	7.81	8.66	8.42
Mauritius	MUS	7.78	7.71	8.69	8.43	9.02	8.87	9.71	10.50	10.87	11.09	10.26
Malawi	MWI	6.04	5.98	6.33	5.98	6.47	6.66	6.70	6.66	6.71	7.58	6.67
Malaysia	MYS	12.76	12.85	12.99	13.09	13.06	13.22	13.19	13.35	13.42	13.34	13.41
Namibia	NAM	8.87	9.04	9.15	9.38	8.88	9.47	9.42	9.24	9.75	9.72	9.56
Niger	NER	5.08	5.26	5.11	5.23	5.19	5.25	5.32	5.60	5.51	5.61	6.26
Nigeria	NGA	8.82	9.02	8.85	8.59	8.93	8.62	8.71	8.97	9.53	9.46	9.54
Nicaragua	NIC	8.36	8.66	8.55	8.66	8.81	8.77	8.56	8.88	8.94	8.86	8.92
Netherlands	NLD	15.08	15.23	15.16	15.01	15.13	15.07	15.10	15.22	15.34	15.28	15.17
Norway	NOR	13.37	13.59	13.57	13.40	13.62	13.58	13.50	13.73	13.89	13.84	13.88
Nepal	NPL	4.71	5.16	5.33	5.35	5.12	5.19	5.31	5.34	5.29	5.29	5.30
New Zealand	NZL	12.58	12.92	12.80	12.75	12.58	12.61	12.57	12.70	12.71	12.74	12.47
Oman	OMN	9.24	9.38	9.66	8.90	8.91	9.21	9.46	9.61	10.07	9.95	10.25
Pakistan	PAK	7.30	7.54	7.66	7.97	7.79	7.71	8.02	8.20	8.52	8.39	8.16
Panama	PAN	11.10	11.24	11.28	10.99	11.09	11.22	11.23	11.39	11.55	11.65	11.72
Peru	PER	8.24	9.08	9.09	9.04	9.28	9.59	9.92	10.22	10.63	10.54	10.45
Philippines	PHL	9.43	9.71	9.74	9.78	9.70	9.98	9.92	9.94	9.77	9.41	9.41
Papua New Guinea	PNG	7.87	7.65	7.79	8.10	8.20	7.97	7.93	8.19	8.60	8.40	8.25
Poland	POL	11.34	11.65	11.56	11.69	12.15	13.03	12.79	13.18	13.36	12.95	13.25
Portugal	PRT	12.33	12.77	12.96	12.76	12.82	13.97	13.95	14.18	14.35	14.32	14.21
Paraguay	PRY	7.56	7.82	8.57	8.50	8.64	8.91	8.99	9.20	9.15	8.98	9.29
Romania	ROM	9.19	9.43	9.56	9.68	9.83	10.56	10.64	10.74	12.27	12.08	11.96
Russian Federation	RUS	9.38	10.77	10.91	11.09	11.38	11.22	11.33	11.43	11.62	11.09	11.45
Rwanda	RWA	3.74	3.99	4.30	4.30	4.37	4.46	4.94	5.10	5.38	5.92	6.03
Senegal	SEN	7.57	7.75	7.57	7.94	8.02	8.10	7.87	8.05	8.24	8.36	8.64
Singapore	SGP	14.40	14.49	14.70	14.71	14.82	14.70	14.05	14.77	14.92	14.99	15.01

Sierra Leone	SLE	4.60	4.93	4.76	4.87	4.90	6.30	6.14	6.08	6.40	6.22	6.21
El Salvador	SLV	8.80	8.91	9.10	9.57	9.67	9.94	9.92	10.15	10.30	10.28	10.17
Serbia	SRB	7.44	8.09	8.10	9.29	9.96	10.11	9.28	10.59	10.76	10.95	10.82
Slovak Republic	SVK	11.35	11.90	12.12	12.08	12.16	13.31	13.51	13.72	13.82	13.85	13.82
Slovenia	SVN	10.32	10.73	10.93	11.17	11.48	11.97	11.97	12.34	12.81	12.88	12.49
Sweden	SWE	14.47	14.65	14.60	14.57	14.53	14.66	14.73	14.80	14.79	14.75	14.68
Syrian Arab Republic	SYR	6.00	6.19	6.15	6.29	6.35	6.65	6.72	6.88	6.85	6.81	6.81
Chad	TCD	5.28	4.63	5.06	6.11	5.93	6.81	6.76	6.87	6.88	6.78	7.09
Togo	TGO	7.64	7.43	7.03	6.88	7.37	7.65	8.08	8.28	8.27	8.01	8.03
Thailand	THA	9.44	9.86	10.28	10.24	10.26	10.35	10.55	10.65	10.73	10.60	10.83
Trinidad and Tobago	TTO	10.32	10.54	10.57	9.54	9.52	9.06	9.50	9.68	9.51	9.52	9.71
Tunisia	TUN	8.92	9.12	9.23	9.25	9.24	9.36	9.69	9.64	9.88	9.92	9.73
Turkey	TUR	9.26	9.44	9.90	9.59	9.67	9.69	10.95	10.85	11.03	10.91	11.21
Tanzania	TZA	4.79	5.02	5.11	5.24	5.47	5.86	5.97	5.85	6.26	6.04	6.25
Uganda	UGA	5.05	5.22	5.46	5.47	6.01	7.02	6.76	6.94	7.20	7.36	7.46
Ukraine	UKR	9.24	9.72	9.67	9.61	9.76	9.92	10.14	10.35	10.67	10.89	11.30
Uruguay	URY	9.43	9.58	9.77	9.43	10.18	10.48	10.53	10.60	10.69	10.70	10.63
United States	USA	11.78	11.87	11.69	11.54	11.63	11.78	11.88	12.08	12.18	11.95	11.68
Venezuela, RB	VEN	9.77	9.80	9.73	9.94	10.23	9.60	9.59	9.43	9.04	8.65	8.18
Vietnam	VNM	6.49	6.83	6.89	7.07	7.17	7.36	7.53	7.84	8.29	8.54	8.09
South Africa	ZAF	9.93	10.17	10.44	10.48	10.35	10.23	10.42	10.63	10.93	10.92	10.60
Zambia	ZMB	8.69	8.97	8.84	9.05	8.88	9.61	9.33	9.49	9.64	9.29	8.68
Zimbabwe	ZWE	7.84	8.03	7.93	7.90	8.10	8.14	8.06	8.40	8.45	8.70	8.87

Table-A-09. Pena-Tsallis Synthetic Index of Globalization with Tsallis Entropy maximization

Country	Code	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Angola	AGO	6.24	6.22	6.31	6.30	6.40	6.32	6.54	6.64	6.84	6.53	6.38
Albania	ALB	5.52	5.52	5.99	6.35	6.51	6.54	6.69	7.03	7.37	7.69	8.10
Argentina	ARG	9.60	9.65	9.36	9.50	9.32	9.38	9.12	9.09	9.08	8.99	8.88
Armenia	ARM	6.22	6.63	6.62	6.42	6.63	6.90	7.20	7.34	7.32	7.34	7.54
Australia	AUS	12.56	12.70	12.74	12.68	12.76	12.68	12.63	12.73	12.79	12.55	12.73
Austria	AUT	13.65	13.94	13.96	13.89	13.93	13.91	13.99	14.01	14.22	14.12	14.05
Azerbaijan	AZE	6.22	6.80	6.95	7.30	7.57	7.96	8.48	8.47	8.74	8.60	8.49
Burundi	BDI	3.45	3.78	3.79	3.70	3.94	4.14	4.28	4.34	5.08	5.08	5.14
Belgium	BEL	14.18	14.31	14.26	14.25	14.24	14.23	14.22	14.25	14.34	14.36	14.34
Benin	BEN	5.07	5.25	5.26	5.20	5.32	5.70	5.71	5.83	6.47	6.26	6.26
Burkina Faso	BFA	5.44	5.38	5.33	5.43	5.52	5.62	5.76	5.88	6.05	6.10	6.30
Bangladesh	BGD	4.34	4.67	4.78	4.88	4.87	5.10	5.26	5.46	5.68	5.69	5.66
Bulgaria	BGR	9.47	9.74	9.76	9.66	9.95	10.25	10.08	10.61	11.11	11.00	10.72
Bahrain	BHR	9.99	10.03	10.16	10.23	10.29	10.30	10.19	10.26	10.27	10.29	10.34
Bahamas, The	BHS	8.04	8.10	8.15	7.97	7.93	8.04	8.16	8.15	8.23	8.03	8.08
Bosnia & Herzegovina	BIH	6.59	7.32	7.48	7.49	7.63	7.96	7.94	8.65	8.91	8.72	8.65
Belize	BLZ	6.66	6.92	7.08	6.93	7.08	7.02	7.14	7.19	7.11	7.08	7.09
Bolivia	BOL	8.35	8.33	8.26	7.38	7.42	7.65	7.71	7.77	7.70	7.64	7.55
Brazil	BRA	8.52	8.42	8.76	8.77	8.64	8.77	8.81	8.77	8.90	8.78	8.87
Barbados	BRB	7.51	7.56	7.66	7.84	7.89	7.90	8.44	8.58	8.65	8.21	8.44
Botswana	BWA	6.84	7.17	7.12	7.37	7.38	7.25	7.07	7.67	7.77	7.33	7.44
Central African Rep	CAF	3.74	3.90	3.95	3.88	3.89	3.90	4.57	5.01	4.67	4.84	5.19
Canada	CAN	13.70	13.76	13.70	13.63	13.54	13.53	13.43	13.45	13.46	13.42	13.33
Switzerland	CHE	13.92	14.12	14.02	13.95	13.92	13.64	13.72	13.67	13.74	13.53	13.55
Chile	CHL	9.89	10.10	10.36	10.22	10.40	10.66	10.78	10.83	11.01	10.98	10.85
China	CHN	8.22	8.40	8.76	8.90	9.02	9.32	9.64	9.51	9.65	9.48	9.48
Cote d'Ivoire	CIV	6.24	6.29	6.30	6.48	6.41	6.43	6.44	6.58	6.82	6.78	6.81
Cameroon	CMR	5.80	5.74	5.70	5.95	5.96	6.26	6.22	6.03	6.29	6.44	6.46

Colombia	COL	7.63	7.64	7.80	7.81	8.04	8.07	8.01	8.56	8.65	8.47	8.50
Costa Rica	CRI	9.26	9.23	9.08	9.06	9.37	8.88	9.29	9.51	9.74	9.56	9.45
Cyprus	CYP	9.81	9.99	10.16	10.21	10.50	11.38	11.36	11.45	13.60	13.55	13.50
Czech Republic	CZE	12.35	12.59	12.81	12.96	12.97	13.30	13.41	13.43	13.56	13.47	13.46
Germany	DEU	12.35	12.62	12.62	12.72	12.71	12.70	12.75	12.80	12.88	12.75	12.67
Denmark	DNK	13.56	13.90	13.90	13.78	13.77	13.74	13.86	13.84	13.92	13.83	13.64
Dominican Republic	DOM	7.01	7.88	8.17	7.74	7.84	8.46	8.43	8.83	9.00	8.27	8.21
Algeria	DZA	6.83	7.07	7.00	7.27	7.31	7.49	7.63	7.63	6.88	7.30	7.71
Ecuador	ECU	8.12	8.21	8.08	8.05	8.59	8.77	8.80	8.75	8.74	8.40	8.18
Egypt, Arab Rep.	EGY	7.91	8.02	8.10	8.11	8.03	8.20	8.57	8.66	8.80	8.78	8.79
Spain	ESP	12.81	13.05	13.12	13.08	13.09	13.02	13.11	13.15	13.25	13.17	13.06
Estonia	EST	10.66	10.91	11.01	11.07	11.15	11.41	11.44	11.65	11.78	11.82	11.74
Ethiopia	ETH	4.23	4.40	4.53	4.56	5.24	5.58	5.56	5.59	5.57	5.38	5.20
Finland	FIN	13.31	13.51	13.50	13.36	13.33	13.43	13.22	13.30	13.43	13.32	13.10
Fiji	FJI	8.20	7.93	8.31	8.36	8.40	8.45	8.46	8.80	8.69	8.52	8.27
France	FRA	12.54	12.84	12.71	12.73	12.76	12.92	12.90	12.98	13.08	13.05	13.01
United Kingdom	GBR	13.35	13.44	13.39	13.38	13.42	13.31	13.38	13.35	13.33	13.28	13.27
Georgia	GEO	6.53	6.80	6.98	7.13	7.28	7.57	7.54	8.08	8.77	9.00	8.94
Ghana	GHA	6.65	7.33	7.28	7.41	7.60	7.91	7.78	7.33	7.58	7.37	7.77
Greece	GRC	10.78	10.96	12.16	12.11	12.31	12.39	12.32	12.46	12.68	12.71	12.53
Guatemala	GTM	7.50	7.53	7.73	7.78	7.78	8.66	8.90	9.06	9.16	9.15	9.10
Guyana	GUY	7.95	9.01	9.23	8.06	8.03	7.90	7.79	8.90	8.60	7.80	7.62
Honduras	HND	8.09	8.03	8.12	8.53	8.70	8.78	8.93	9.11	9.23	9.33	9.22
Croatia	HRV	9.31	9.39	9.62	9.86	10.20	10.78	10.89	11.01	11.23	11.18	11.16
Hungary	HUN	12.59	12.66	12.78	12.65	12.66	13.14	13.24	13.45	13.50	13.52	13.57
Indonesia	IDN	7.95	8.01	7.95	7.55	7.65	8.08	8.40	8.47	8.45	8.34	8.31
India	IND	6.53	6.71	6.79	6.90	7.03	7.06	7.33	7.58	7.72	7.73	7.71
Ireland	IRL	12.70	12.82	12.89	12.76	12.77	12.70	12.84	12.75	12.77	12.70	14.22
Iran, Islamic Rep.	IRN	4.57	4.84	4.86	5.59	5.71	5.39	5.43	5.68	5.46	5.46	5.65
Iceland	ISL	11.94	12.12	12.20	12.04	12.20	11.56	11.55	11.57	11.60	12.22	10.97
Israel	ISR	9.87	10.02	11.24	11.31	11.33	11.39	11.52	11.54	11.62	12.06	12.03
Italy	ITA	12.41	12.60	12.53	12.51	12.47	12.55	12.54	12.54	12.64	12.58	12.52
Jamaica	JAM	8.94	9.06	8.86	8.77	8.99	9.91	8.80	8.99	9.14	9.07	8.79
Jordan	JOR	9.61	9.87	10.03	10.01	10.12	10.15	10.36	10.41	10.67	10.62	10.45
Japan	JPN	8.72	8.87	8.86	8.86	9.07	9.11	9.15	10.47	10.53	10.29	10.31
Kazakhstan	KAZ	6.45	7.04	7.26	7.33	7.42	7.49	7.72	7.70	8.21	8.20	8.32
Kenya	KEN	6.07	6.17	6.25	6.36	6.42	6.59	6.58	6.57	6.73	6.65	6.83
Kyrgyz Republic	KGZ	7.71	8.14	7.91	7.75	6.94	7.32	7.39	8.49	8.80	7.96	7.92
Korea, Rep.	KOR	8.64	8.82	9.11	9.01	9.02	9.18	9.05	9.17	9.44	9.44	9.39
Kuwait	KWT	10.82	10.64	10.66	10.62	10.64	10.70	10.80	10.93	11.20	11.10	11.23
Sri Lanka	LKA	6.49	7.38	7.45	7.39	7.57	7.46	7.52	7.78	7.83	7.69	7.39
Lesotho	LSO	5.85	5.90	5.83	6.08	6.04	6.04	6.01	5.98	5.98	6.72	6.10
Lithuania	LTU	8.65	8.80	9.09	9.27	9.39	9.64	9.83	10.01	10.22	10.33	9.87
Luxembourg	LUX	11.71	11.78	11.85	11.97	12.04	12.15	12.00	11.96	12.72	12.70	12.71
Latvia	LVA	8.97	9.11	9.33	9.44	9.63	10.04	10.15	10.45	10.48	10.37	9.83
Morocco	MAR	7.10	7.81	8.19	8.36	8.55	8.39	8.78	8.74	8.99	9.00	9.08
Moldova	MDA	7.69	8.03	7.94	7.89	8.66	8.61	8.57	8.91	9.28	9.19	9.13
Madagascar	MDG	4.30	4.53	4.73	4.64	4.80	5.92	5.69	6.06	6.14	6.29	6.30
Mexico	MEX	8.67	8.76	8.65	8.68	8.60	8.59	8.87	8.77	8.83	8.80	8.98
Macedonia, FYR	MKD	6.25	6.85	6.99	7.33	7.38	7.46	8.05	8.04	9.38	9.03	8.92
Mali	MLI	5.20	5.27	5.64	6.05	6.13	6.22	6.11	6.49	6.29	6.31	6.55
Malta	MLT	10.26	10.28	10.15	10.49	10.47	11.17	11.16	11.34	11.44	11.41	11.44
Mongolia	MNG	5.33	5.55	5.57	6.29	6.48	6.48	6.77	7.21	7.16	7.24	7.73
Mozambique	MOZ	5.95	6.24	6.32	6.49	6.32	6.73	6.85	6.90	7.00	6.92	6.95
Mauritania	MRT	5.25	5.51	5.58	5.65	5.66	5.85	6.01	6.02	6.44	7.26	7.01
Mauritius	MUS	7.13	7.11	8.34	8.01	8.59	8.46	9.23	9.86	10.09	10.17	9.44

Malawi	MWI	5.15	5.13	5.50	5.43	5.63	5.77	5.73	5.75	5.88	6.32	5.84
Malaysia	MYS	11.65	11.73	11.94	12.03	11.96	12.09	12.05	12.18	12.21	12.16	12.20
Namibia	NAM	7.52	7.61	7.73	7.91	7.65	8.12	7.96	7.79	8.16	8.13	8.02
Niger	NER	4.43	4.53	4.43	4.55	4.54	4.66	4.71	5.05	4.88	4.97	5.38
Nigeria	NGA	7.23	7.46	7.37	7.26	7.53	7.44	7.68	7.87	8.27	8.16	8.16
Nicaragua	NIC	7.77	7.99	7.94	8.07	8.23	8.15	7.93	8.24	8.30	8.20	8.32
Netherlands	NLD	14.06	14.16	14.10	13.97	14.09	14.00	14.01	14.08	14.21	14.16	14.07
Norway	NOR	12.83	12.91	12.88	12.73	12.94	12.75	12.58	12.77	12.89	12.85	12.96
Nepal	NPL	4.40	4.91	5.00	5.05	4.78	4.85	5.04	5.07	5.06	5.07	5.12
New Zealand	NZL	11.70	11.96	11.89	11.83	11.69	11.69	11.66	11.77	11.76	11.78	11.61
Oman	OMN	8.34	8.49	8.82	8.20	8.21	8.44	8.57	8.63	8.98	8.93	9.14
Pakistan	PAK	6.71	7.00	7.19	7.54	7.34	7.29	7.51	7.61	7.81	7.75	7.68
Panama	PAN	9.60	9.74	9.83	9.59	9.67	9.79	9.77	9.93	10.10	10.21	10.34
Peru	PER	7.68	8.43	8.47	8.43	8.55	8.75	8.97	9.17	9.63	9.59	9.54
Philippines	PHL	8.24	8.49	8.61	8.67	8.58	8.94	8.87	8.85	8.73	8.51	8.52
Papua New Guinea	PNG	6.21	6.03	6.13	6.59	6.58	6.34	6.32	6.51	7.10	6.98	6.90
Poland	POL	11.24	11.40	11.28	11.43	11.76	12.42	12.22	12.47	12.62	12.41	12.58
Portugal	PRT	11.54	11.85	11.99	11.84	11.91	13.30	13.23	13.34	13.48	13.44	13.38
Paraguay	PRY	6.96	7.18	7.95	7.81	7.97	8.20	8.32	8.45	8.44	8.31	8.57
Romania	ROM	8.75	8.91	8.95	9.06	9.19	9.67	9.89	9.87	11.76	11.68	11.64
Russian Federation	RUS	8.70	10.20	10.36	10.53	10.64	10.60	10.63	10.64	10.79	10.46	10.71
Rwanda	RWA	3.57	3.74	4.05	4.14	4.20	4.31	4.72	4.88	5.10	5.48	5.62
Senegal	SEN	6.61	6.77	6.64	7.02	7.14	7.24	7.07	7.26	7.43	7.50	7.71
Singapore	SGP	13.36	13.44	13.65	13.63	13.75	13.63	13.00	13.68	13.81	13.90	13.90
Sierra Leone	SLE	3.99	4.25	4.15	4.22	4.28	5.34	5.32	5.26	5.37	5.32	5.42
El Salvador	SLV	8.34	8.41	8.56	8.85	8.91	9.16	9.13	9.36	9.47	9.59	9.47
Serbia	SRB	7.14	7.72	7.74	8.86	9.44	9.55	8.72	9.86	10.05	10.16	10.11
Slovak Republic	SVK	11.06	11.45	11.64	11.52	11.55	12.57	12.82	12.97	13.03	13.06	13.04
Slovenia	SVN	9.85	10.14	10.34	10.45	10.76	11.26	11.23	11.42	11.73	11.77	11.51
Sweden	SWE	13.65	13.74	13.68	13.71	13.69	13.74	13.77	13.79	13.76	13.72	13.67
Syrian Arab Republic	SYR	5.01	5.14	5.16	5.30	5.39	5.70	5.74	5.96	6.00	5.93	6.02
Chad	TCO	4.26	3.63	3.90	4.73	4.73	5.54	5.50	5.65	5.67	5.58	5.83
Togo	TGO	6.49	6.08	5.72	5.56	6.11	6.30	6.64	6.81	6.82	6.66	6.71
Thailand	THA	8.34	8.71	9.06	9.00	8.93	9.07	9.20	9.34	9.39	9.33	9.58
Trinidad and Tobago	TTO	9.12	9.22	9.38	8.16	8.13	7.86	8.16	8.26	8.17	8.17	8.28
Tunisia	TUN	7.68	7.80	7.94	8.01	8.01	8.15	8.43	8.32	8.46	8.47	8.37
Turkey	TUR	8.87	9.01	9.25	9.06	9.17	9.25	10.78	10.55	10.72	10.72	10.90
Tanzania	TZA	4.24	4.41	4.47	4.66	4.89	5.20	5.31	5.34	5.60	5.49	5.55
Uganda	UGA	4.66	4.85	4.99	5.08	5.46	6.34	6.07	6.17	6.42	6.58	6.69
Ukraine	UKR	8.49	8.86	8.91	8.89	9.00	9.17	9.34	9.49	9.75	9.94	10.17
Uruguay	URY	9.00	9.09	9.16	8.88	9.21	9.42	9.58	9.59	9.65	9.75	9.76
United States	USA	11.87	11.93	11.82	11.69	11.76	11.85	11.88	11.99	12.06	11.90	11.68
Venezuela, RB	VEN	8.98	9.01	8.96	8.97	9.20	8.63	8.70	8.49	8.28	8.09	7.73
Vietnam	VNM	5.17	5.41	5.50	5.66	5.78	6.01	6.12	6.41	6.73	6.88	6.63
South Africa	ZAF	8.97	9.18	9.43	9.44	9.35	9.27	9.41	9.55	9.72	9.74	9.58
Zambia	ZMB	7.31	7.57	7.52	7.73	7.65	8.12	7.85	8.05	8.09	7.85	7.59
Zimbabwe	ZWE	6.58	6.75	6.67	6.64	6.83	6.80	6.68	6.97	7.00	7.15	7.36

Table-A-10. Pena-Mittal Synthetic Index of Globalization with Sharma-Mittal Entropy maximization												
Country	Code	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Angola	AGO	6.11	6.09	6.17	6.14	6.23	6.14	6.33	6.42	6.60	6.29	6.13
Albania	ALB	5.59	5.60	6.04	6.36	6.53	6.61	6.78	7.09	7.42	7.75	8.16
Argentina	ARG	9.46	9.50	9.21	9.34	9.16	9.23	8.97	8.95	8.95	8.92	8.81
Armenia	ARM	6.18	6.51	6.49	6.35	6.57	6.88	7.14	7.30	7.30	7.30	7.48
Australia	AUS	12.56	12.72	12.75	12.68	12.76	12.69	12.65	12.76	12.83	12.59	12.77
Austria	AUT	13.75	14.04	14.05	13.98	14.02	14.01	14.08	14.09	14.27	14.18	14.11
Azerbaijan	AZE	6.22	6.76	6.91	7.22	7.51	7.87	8.31	8.31	8.57	8.46	8.34
Burundi	BDI	3.42	3.73	3.69	3.59	3.82	3.99	4.12	4.17	4.92	4.92	4.96
Belgium	BEL	14.18	14.30	14.25	14.23	14.22	14.22	14.21	14.24	14.33	14.35	14.33
Benin	BEN	5.13	5.31	5.33	5.25	5.35	5.74	5.74	5.85	6.63	6.40	6.34
Burkina Faso	BFA	5.53	5.48	5.38	5.47	5.56	5.65	5.80	5.93	6.08	6.12	6.33
Bangladesh	BGD	4.37	4.67	4.76	4.86	4.87	5.08	5.25	5.43	5.63	5.62	5.59
Bulgaria	BGR	9.37	9.63	9.66	9.55	9.82	10.13	9.99	10.50	10.98	10.87	10.60
Bahrain	BHR	10.18	10.20	10.31	10.35	10.44	10.47	10.41	10.45	10.45	10.45	10.50
Bahamas, The	BHS	8.28	8.30	8.33	8.14	8.10	8.22	8.33	8.30	8.39	8.18	8.24
Bosnia & Herzegovina	BIH	6.51	7.22	7.36	7.37	7.50	7.80	7.76	8.47	8.72	8.50	8.46
Belize	BLZ	6.79	7.07	7.23	7.09	7.26	7.17	7.28	7.32	7.26	7.24	7.23
Bolivia	BOL	8.24	8.23	8.17	7.30	7.36	7.63	7.68	7.77	7.69	7.62	7.52
Brazil	BRA	8.35	8.25	8.58	8.60	8.48	8.60	8.64	8.61	8.73	8.58	8.66
Barbados	BRB	7.59	7.63	7.71	7.86	7.92	7.93	8.47	8.61	8.68	8.19	8.42
Botswana	BWA	6.88	7.23	7.22	7.46	7.46	7.34	7.17	7.78	7.88	7.44	7.54
Central African Rep	CAF	3.75	3.90	3.94	3.85	3.86	3.85	4.52	4.95	4.61	4.76	5.10
Canada	CAN	13.68	13.74	13.68	13.61	13.52	13.52	13.42	13.44	13.46	13.42	13.34
Switzerland	CHE	14.04	14.23	14.13	14.06	14.03	13.76	13.83	13.78	13.86	13.66	13.68
Chile	CHL	9.74	9.94	10.21	10.11	10.29	10.55	10.65	10.67	10.86	10.82	10.70
China	CHN	8.09	8.25	8.61	8.72	8.85	9.16	9.47	9.35	9.50	9.33	9.33
Cote d'Ivoire	CIV	6.24	6.27	6.27	6.46	6.41	6.43	6.42	6.56	6.81	6.77	6.80
Cameroon	CMR	5.71	5.64	5.60	5.84	5.84	6.13	6.09	5.89	6.18	6.35	6.28
Colombia	COL	7.46	7.48	7.63	7.64	7.87	7.90	7.85	8.41	8.50	8.33	8.36
Costa Rica	CRI	9.24	9.23	9.06	9.03	9.34	8.86	9.28	9.48	9.70	9.50	9.40
Cyprus	CYP	9.86	10.04	10.21	10.25	10.53	11.37	11.35	11.44	13.61	13.56	13.50
Czech Republic	CZE	12.30	12.52	12.74	12.89	12.89	13.20	13.30	13.30	13.47	13.40	13.37
Germany	DEU	12.40	12.67	12.66	12.75	12.75	12.73	12.78	12.83	12.91	12.79	12.70
Denmark	DNK	13.61	13.94	13.94	13.84	13.80	13.78	13.91	13.88	13.98	13.89	13.71
Dominican Republic	DOM	7.07	7.95	8.23	7.76	7.86	8.49	8.46	8.86	9.03	8.29	8.22
Algeria	DZA	6.77	6.99	6.87	7.11	7.17	7.40	7.57	7.56	6.81	7.24	7.61
Ecuador	ECU	8.00	8.10	7.98	7.94	8.49	8.69	8.73	8.65	8.62	8.26	8.10
Egypt, Arab Rep.	EGY	7.86	7.95	8.02	8.03	7.96	8.14	8.51	8.59	8.73	8.71	8.73
Spain	ESP	12.75	12.99	13.07	13.03	13.06	13.00	13.10	13.15	13.25	13.16	13.07
Estonia	EST	10.71	10.93	11.02	11.07	11.16	11.42	11.44	11.60	11.72	11.76	11.67
Ethiopia	ETH	4.23	4.35	4.49	4.52	5.22	5.55	5.53	5.55	5.55	5.36	5.18
Finland	FIN	13.28	13.48	13.47	13.33	13.29	13.40	13.19	13.28	13.40	13.29	13.09
Fiji	FJI	8.36	8.09	8.47	8.50	8.55	8.59	8.58	8.90	8.78	8.61	8.35
France	FRA	12.59	12.89	12.76	12.77	12.81	12.97	12.94	13.04	13.14	13.10	13.05
United Kingdom	GBR	13.37	13.47	13.41	13.39	13.44	13.31	13.40	13.38	13.35	13.30	13.28
Georgia	GEO	6.46	6.73	6.90	7.04	7.21	7.52	7.51	8.07	8.75	8.99	8.92
Ghana	GHA	6.83	7.50	7.46	7.56	7.76	8.07	7.93	7.53	7.76	7.45	7.94
Greece	GRC	10.78	10.98	12.18	12.13	12.35	12.42	12.34	12.49	12.70	12.71	12.53
Guatemala	GTM	7.35	7.45	7.65	7.71	7.71	8.60	8.85	9.03	9.13	9.11	9.07
Guyana	GUY	7.92	8.98	9.19	8.05	8.03	7.96	7.84	8.96	8.67	7.80	7.63
Honduras	HND	8.03	8.01	8.10	8.45	8.61	8.69	8.83	9.03	9.16	9.26	9.15
Croatia	HRV	9.37	9.45	9.67	9.91	10.24	10.81	10.91	11.03	11.24	11.20	11.17

Hungary	HUN	12.57	12.65	12.77	12.64	12.64	13.10	13.20	13.38	13.45	13.45	13.51
Indonesia	IDN	7.83	7.90	7.82	7.43	7.52	7.94	8.27	8.33	8.31	8.21	8.17
India	IND	6.47	6.64	6.72	6.81	6.96	6.99	7.26	7.47	7.63	7.66	7.64
Ireland	IRL	12.78	12.90	12.98	12.84	12.85	12.81	12.91	12.82	12.85	12.77	14.26
Iran, Islamic Rep.	IRN	4.47	4.73	4.73	5.45	5.57	5.24	5.30	5.55	5.32	5.32	5.51
Iceland	ISL	12.02	12.20	12.28	12.12	12.27	11.63	11.60	11.68	11.71	12.34	11.09
Israel	ISR	10.01	10.17	11.38	11.45	11.48	11.53	11.67	11.69	11.77	12.22	12.19
Italy	ITA	12.41	12.61	12.54	12.53	12.48	12.55	12.55	12.57	12.68	12.62	12.56
Jamaica	JAM	8.95	9.06	8.95	8.88	9.04	9.96	8.86	9.04	9.22	9.14	8.87
Jordan	JOR	9.72	10.00	10.16	10.14	10.21	10.26	10.46	10.48	10.71	10.63	10.47
Japan	JPN	8.60	8.76	8.74	8.74	8.95	9.01	9.06	10.41	10.48	10.19	10.20
Kazakhstan	KAZ	6.42	7.00	7.22	7.29	7.39	7.47	7.69	7.69	8.20	8.19	8.31
Kenya	KEN	6.06	6.18	6.25	6.32	6.43	6.56	6.55	6.52	6.72	6.60	6.84
Kyrgyz Republic	KGZ	7.70	8.08	7.83	7.68	6.86	7.19	7.25	8.36	8.67	7.84	7.79
Korea, Rep.	KOR	8.60	8.78	9.06	8.97	8.99	9.14	9.00	9.12	9.41	9.40	9.35
Kuwait	KWT	10.91	10.71	10.73	10.71	10.71	10.77	10.86	11.00	11.27	11.17	11.30
Sri Lanka	LKA	6.49	7.37	7.45	7.39	7.57	7.47	7.52	7.78	7.82	7.69	7.39
Lesotho	LSO	5.92	5.92	5.77	5.98	5.93	5.93	5.86	5.83	5.83	6.58	5.94
Lithuania	LTU	8.61	8.74	9.01	9.16	9.27	9.51	9.71	9.89	10.10	10.22	9.75
Luxembourg	LUX	11.83	11.89	11.96	12.03	12.11	12.20	12.05	12.01	12.78	12.75	12.76
Latvia	LVA	8.93	9.08	9.29	9.37	9.56	9.96	10.09	10.38	10.42	10.32	9.79
Morocco	MAR	7.04	7.76	8.13	8.30	8.50	8.28	8.72	8.67	8.93	8.93	9.00
Moldova	MDA	7.64	7.94	7.83	7.78	8.54	8.52	8.49	8.81	9.17	9.08	8.98
Madagascar	MDG	4.15	4.37	4.56	4.48	4.63	5.77	5.54	5.90	5.99	6.14	6.14
Mexico	MEX	8.61	8.69	8.57	8.58	8.52	8.52	8.82	8.72	8.75	8.72	8.90
Macedonia, FYR	MKD	6.34	6.82	6.95	7.27	7.33	7.39	7.93	7.94	9.25	8.92	8.84
Mali	MLI	5.25	5.30	5.66	6.06	6.12	6.21	6.09	6.48	6.28	6.31	6.54
Malta	MLT	10.23	10.25	10.13	10.44	10.42	11.12	11.11	11.28	11.38	11.35	11.39
Mongolia	MNG	5.23	5.43	5.45	6.17	6.34	6.34	6.63	7.05	6.99	7.07	7.54
Mozambique	MOZ	5.94	6.22	6.36	6.53	6.33	6.71	6.82	6.86	6.96	6.86	6.79
Mauritania	MRT	5.30	5.54	5.62	5.65	5.65	5.80	5.94	5.94	6.41	7.24	6.98
Mauritius	MUS	7.10	7.07	8.31	7.99	8.55	8.42	9.18	9.80	10.03	10.11	9.39
Malawi	MWI	5.18	5.16	5.53	5.46	5.63	5.76	5.72	5.74	5.86	6.31	5.80
Malaysia	MYS	11.66	11.75	11.94	12.05	11.98	12.12	12.07	12.21	12.25	12.18	12.23
Namibia	NAM	7.69	7.76	7.87	8.08	7.83	8.26	8.15	8.00	8.37	8.31	8.21
Niger	NER	4.43	4.53	4.41	4.52	4.51	4.63	4.68	5.01	4.84	4.90	5.31
Nigeria	NGA	7.24	7.46	7.34	7.23	7.49	7.41	7.65	7.84	8.24	8.12	8.11
Nicaragua	NIC	7.69	7.91	7.85	7.97	8.13	8.06	7.87	8.15	8.23	8.13	8.23
Netherlands	NLD	14.13	14.23	14.17	14.05	14.16	14.07	14.07	14.14	14.26	14.21	14.12
Norway	NOR	12.88	12.98	12.96	12.80	13.01	12.83	12.67	12.85	12.96	12.92	13.03
Nepal	NPL	4.45	4.83	4.94	5.01	4.83	4.87	5.06	5.08	5.06	5.06	5.11
New Zealand	NZL	11.67	11.94	11.87	11.82	11.68	11.70	11.66	11.76	11.76	11.79	11.63
Oman	OMN	8.48	8.64	8.88	8.33	8.35	8.59	8.70	8.80	9.15	9.11	9.29
Pakistan	PAK	6.76	7.01	7.20	7.54	7.33	7.27	7.48	7.59	7.79	7.74	7.66
Panama	PAN	9.52	9.67	9.74	9.48	9.58	9.70	9.68	9.85	10.01	10.11	10.24
Peru	PER	7.54	8.31	8.36	8.32	8.46	8.69	8.90	9.11	9.55	9.50	9.45
Philippines	PHL	8.21	8.47	8.57	8.61	8.52	8.89	8.83	8.81	8.69	8.47	8.47
Papua New Guinea	PNG	6.14	5.98	6.01	6.41	6.39	6.15	6.11	6.30	6.89	6.78	6.69
Poland	POL	11.16	11.34	11.22	11.34	11.66	12.31	12.13	12.36	12.49	12.29	12.45
Portugal	PRT	11.53	11.83	11.98	11.84	11.90	13.28	13.21	13.33	13.48	13.44	13.37
Paraguay	PRY	6.94	7.12	7.88	7.74	7.91	8.14	8.27	8.40	8.39	8.27	8.52
Romania	ROM	8.65	8.81	8.86	8.97	9.10	9.58	9.79	9.76	11.66	11.60	11.54
Russian Federation	RUS	8.55	10.03	10.18	10.35	10.46	10.43	10.47	10.47	10.63	10.29	10.55
Rwanda	RWA	3.61	3.78	4.06	4.15	4.20	4.31	4.72	4.87	5.12	5.47	5.62
Senegal	SEN	6.61	6.76	6.62	6.99	7.11	7.21	7.04	7.25	7.41	7.49	7.69
Singapore	SGP	13.41	13.50	13.70	13.67	13.79	13.68	13.05	13.74	13.89	13.98	13.99

Sierra Leone	SLE	3.99	4.20	4.11	4.18	4.24	5.30	5.29	5.23	5.33	5.28	5.38
El Salvador	SLV	8.33	8.43	8.57	8.84	8.90	9.16	9.12	9.36	9.46	9.55	9.44
Serbia	SRB	7.14	7.65	7.69	8.81	9.38	9.46	8.62	9.78	9.93	10.05	9.99
Slovak Republic	SVK	11.02	11.39	11.58	11.43	11.46	12.48	12.67	12.83	12.90	12.94	12.91
Slovenia	SVN	9.86	10.15	10.35	10.47	10.77	11.24	11.22	11.39	11.69	11.73	11.48
Sweden	SWE	13.74	13.84	13.78	13.80	13.78	13.83	13.86	13.86	13.84	13.80	13.75
Syrian Arab Republic	SYR	5.13	5.26	5.25	5.36	5.45	5.76	5.79	6.01	6.05	6.00	6.09
Chad	TCD	4.32	3.65	3.92	4.71	4.70	5.52	5.48	5.62	5.64	5.54	5.79
Togo	TGO	6.42	6.12	5.76	5.62	6.18	6.33	6.70	6.83	6.85	6.68	6.74
Thailand	THA	8.24	8.60	8.94	8.89	8.82	8.96	9.09	9.23	9.28	9.22	9.44
Trinidad and Tobago	TTO	9.06	9.18	9.30	8.12	8.08	7.85	8.14	8.25	8.16	8.16	8.27
Tunisia	TUN	7.62	7.75	7.88	7.95	7.96	8.09	8.37	8.27	8.41	8.41	8.31
Turkey	TUR	8.87	9.00	9.21	9.00	9.12	9.22	10.70	10.50	10.63	10.65	10.84
Tanzania	TZA	4.27	4.42	4.46	4.65	4.83	5.15	5.24	5.30	5.57	5.45	5.51
Uganda	UGA	4.69	4.86	5.00	5.07	5.44	6.33	6.05	6.15	6.41	6.52	6.64
Ukraine	UKR	8.43	8.80	8.88	8.85	8.97	9.13	9.31	9.45	9.69	9.88	10.10
Uruguay	URY	9.05	9.13	9.18	8.92	9.26	9.46	9.62	9.63	9.69	9.77	9.78
United States	USA	11.87	11.94	11.83	11.70	11.76	11.87	11.89	12.00	12.07	11.91	11.70
Venezuela, RB	VEN	8.88	8.91	8.86	8.86	9.09	8.53	8.61	8.40	8.17	7.97	7.61
Vietnam	VNM	5.07	5.31	5.36	5.51	5.62	5.82	5.95	6.20	6.52	6.63	6.43
South Africa	ZAF	8.99	9.20	9.43	9.46	9.39	9.32	9.46	9.59	9.76	9.77	9.59
Zambia	ZMB	7.25	7.53	7.46	7.65	7.58	8.02	7.77	7.98	8.03	7.77	7.51
Zimbabwe	ZWE	6.60	6.76	6.68	6.60	6.77	6.76	6.66	6.93	6.93	7.05	7.35